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THE METHOD, MEDITATIONS AND PHILOSOPHY

of

DESCARTES

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THE METHOD, MEDITATIONS AND PHILOSOPHY

of

DESCARTES

TRANSLATED FROM THE ORIGINAL TEXTS WITH A
NEW INTRODUCTORY ESSAY, HISTORICAL
AND CRITICAL

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AND A SPECIAL INTRODUCTION BY
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SPECIAL INTRODUCTION

TO THE Frenchman, René Descartes, modern learning is indebted for some of the most potent factors in its advancement. These are: in Mathematics, the invention of the Binomial Theorem and the application of Algebra to Geometry in the Analytical Geometry; in Physics, the suggestion of the evolution of the universe through Vortices and the discovery of the laws of the Refraction of Light; in Physiology, the doctrine of the Animal Spirits and the theory of the Mechanism of the soul's operation in the body; in Philosophy, the finding of the ultimate reality in subjective consciousness and the deducting thence of an argument for, if not a proof of, the Existence of God; in Epistemology, the grounding of scientific Law on the existence of a true God; in Ethics, the tracing of evil to the necessary error arising from judgments based on finite and therefore imperfect knowledge.

Whatever significance we attach to the alleged flaw in the argument in proof of God's existence drawn by Descartes from our mind's necessary conception of a perfect being, which conception in turn necessarily implies the existence of its object, the fact remains that in this ultimate unity of the soul's apperception whereby the many are brought into relation to a single all-embracing, all-regulating Whole lies the possibility of a science of the universe, and that in uniting the subjective certainty of consciousness with the clear precision of mathematical reasoning Descartes gave a new and vital impetus to human learning in both its physical and metaphysical endeavors.

René Descartes (Lat. *Renatus Cartesius*) was born in La Haye, Touraine, France, on the 31st of March, 1596. His parents were well to do, of the official class, and his father was the owner of considerable estates. His mother dying soon after his birth, he was given in charge of a faithful nurse, whose care for him, a child so frail that his life was nearly despaired of, was afterward gratefully rewarded. His father intrusted his education to the Jesuits and at the age of eight years he was sent to the college at La Flêche in Anjou, where he remained eight years. It was then, in his seventeenth year, that we read of his becoming dissatisfied with the hollow and formal learning of the Church schools and demanding a free and deeper range for his mental faculties. One study, favored of the Jesuits, mathematics, so deeply interested him that on leaving the college and going to Paris to taste the pleasures of a life in the world, he became in a year's time wearied of its dissipations and suddenly withdrew himself into almost cloistral retirement, in a little house at St. Germain, to give himself up to the fascinations of Arithmetic and Geometry. The disturbed political life of the capital led him to leave France, and in his twenty-first year he went to the Netherlands and enlisted in the army of Prince Maurice of Orange. After two years' service in Holland during an interval of peace, he enlisted again as a private in the Bavarian service in the war between Austria and the Protestant princes. In this war he was present at the battle of Prague, and in the following year he served in the Hungarian campaign. Quitting the service in the year 1621, he journeyed through the eastern and northern countries returning through Belgium to Paris in 1622. Disposing of some inherited property in a way to yield him a comfortable income he now starts on a tour in Italy and Switzerland. Paying his vows at Loretto and visiting Rome and Venice, he returns again to France in 1626, where he resumes his mathematical studies with his congenial companions, the famous mathematician Mydorge and his former schoolmate the priest Mersenne. He was now interested in the study of the refraction of light, and in the perfecting of lenses for optical instruments. His military zeal again caused an interruption of these peaceful studies in calling him away to be a participant of the siege of Rochelle in 1628. Returning to Paris, his mind divided between his delight in adventure and the charms of the deeper problems of science and philosophy, and finding a life of seclusion impossible there, at the suggestion of Cardinal Berulle, the founder of the Congregation of the Oratory, he leaves Paris and in 1629 settles in Holland where for twenty years he devotes himself to developing his philosophical system and publishing his works. Three times he visits Paris to look after his family affairs and to receive the pension twice awarded him by the Government. He made a hasty visit to England in the study of magnetic phenomena in 1630.

The last year of his life was spent in Stockholm, Sweden, whither he had been called by the young Queen Christiana, daughter of Gustave Adolphus, who, in her ambition to adorn her reign with the lustre of learning, desired the immediate tutelage of the now renowned philosopher, as well as his assistance in planning an academy of sciences. In the pursuit of these duties under arduous circumstances the philosopher (compelled to give an hour's instruction daily to his energetic royal pupil at five o clock in the morning) contracted an inflammation of the lungs, and ten days after delivering to her the code for the proposed academy, he died: His remains were carried to France and after remaining in the Pantheon until 1819 they were transferred to the Church of St. Germain des Prés, where they now repose. Gustave III. erected a monument to his memory at Stockholm.

If such a thing can be conceived as a knighthood of pure intellect it was emphasized in this illustrious Frenchman whose career almost entirely outside of his native land gives the country of his birth a place in the front ranks of philosophic achievement. While accounted generally the founder of the rationalistic or dogmatic philosophy which underlies modern idealism, on the other hand it may be claimed with equal propriety, as Huxley showed in his address to the students in Cambridge in 1870, that the principles of his « *Traité d' l'hómme* » very nearly coincide with the materialistic aspects of modern psychophysiology. A man so devout in spirit that his « Meditations » read like the « Confessions » of St. Augustine and so loyal to his Church that he made it the first of his maxims of conduct « To abide by the old law and religion,» and who died in the happy conviction that he had succeeded in proving with a certainty as clear as that of mathematics the existence of God, he was, in the half century succeeding his death, to have his works placed in the Index Expurgatorius by the Church, his teachings excluded from the university, and an oration at the interment of his remains in Paris forbidden by royal command. In England, Bishop Parker of Oxford classed Descartes among the infidels with Hobbs and Gassendi, and Protestants generally regarded as atheistic his principle that the Bible was not intended to teach the sciences, and, as an encroachment on the Church's authority, his doctrine that the existence of God could be proved by reason alone. The man who perhaps more than any other has brought the lustre of philosophic renown upon France lived nearly all the years of his literary activity beyond its borders, taught in none of her schools and even as a soldier fought in none of her foreign wars. Laboring for years and with unflagging zeal in the elaboration of his Equation of the Curve and his system of symbols which made possible the Binomial Theorem, yet he avows that geometry was never his first love and that mathematics are but the outer shell to the real system of his philosophy. Nothing, at least, would satisfy him short of the universal mathesis or a view of relations and powers so universal as to embrace the whole field of possible knowledge. He was never married. Although he wrote poems and was devoted to music in his youth, yet he seems to fight shy of even these recreations as he does of the enticements of friendship, preferring the cool and calm states of solitude as conducive to his life's chosen task, — that of finding the truth of science in the truth of God. The twenty years of his life in Holland during which he resided mostly in a number of little university towns was the time of a brilliant court under the stadtholder Frederick Henry and of the famous art of Rembrandt and the scholarship of Grotius and Vossius. But these were as nothing to Descartes who shows a contempt for all learning and art for their own sake. Knowledge, he maintained, must be grounded in intelligence rather than in erudition. He studies the world, men, states, nature only as spectacles of a deep inner and immortal principle into whose secret he would penetrate. For this he keeps himself aloof from personal and political entanglements, not allowing even his family affairs to engross him; and, while he keeps himself in touch with intellectual movements in Paris through the correspondence of his friends there, he does so with the precaution to keep his own whereabouts a secret from the world at large. It is as if he would make his mind a perfectly clear, cold crystal reflecting like the monad of the later system of Leibnitz, in perfect distinctness that truth of the universe and its God that he would give to the world. Destined as they were to be for a time put under the ban of both the Church and the universities, yet immediately on their publication, the doctrines of Descartes were received with a popular enthusiasm that made them the fashionable cult of Cardinals, scholars, and princes in the court of Louis XIV., and the favorite theme of the *salons* of Madame de Sevigné, and the Duchesse de Maine. Although already forbidden by the Index in 1663 and condemned as dangerous to the faith by the Archbishop of Paris in 1671, still in 1680 the lectures of the popular expositor of the new philosophy, Pierre Silvan Regis, were so sought after in Paris that seats in the audience hall could with difficulty be obtained. The principle of his physics and mathematics soon assumed their essential place in the progress of modern science and in Holland, where from the first the new philosophy found many advocates, Spinoza, seizing upon the Cartesian principle of the development of philosophy from the *a priori* ground of the most certain knowledge, founded his system of Idealistic Monism which has largely entered into all the modern schools of speculative thought.

What has given Descartes a unique hold upon the thought of modern times is his making the mind's position of universal doubt the proper starting place in philosophy. This he does, however, not in the spirit of skepticism, but in the effort to construct a system of truthful knowledge. As Bacon was dissatisfied with the assumption by the schools of *a priori* principles that had no ground in experience, so Descartes, finding himself disposed to question the authority of all that was taught him, conceived the idea of allowing this very doubt to run its full course, and so of finding what ground, if any remained, for a certain knowledge of anything whatever. Thus doubt as the natural attitude of the mind, instead of being combatted as an enemy to even the highest and surest knowledge, was itself to be forced to yield up its own tribute of knowing. This it does in bringing the doubter to the first and fundamental admission that in doubting he is thinking, and that in order to think he must at least exist. Therefore, the existence of the thinker, or the fact of thinking, is a fact beyond the possibility of doubt. Hence the basic maxim of the Cartesian philosophy, *Je pense, donc je suis.* In developing his philosophic method, Descartes lays down the following rules for his guidance:

I. Never to accept anything as true which I do not clearly know to be such.

II. Divide difficulties into as many parts as possible.

III. Proceed from the simplest and surest knowledges to the more complex, and —

IV. Make the connection so complete, and the reviews so general, that nothing shall be overlooked.

« Convinced, » he says, « that I was as open to error as any other, I rejected as false all the reasonings I had hitherto taken as demonstrations; also that thoughts, awake, may be as really experienced as when asleep, therefore all may be delusions; yet in thinking thus I must be a somewhat; hence *cogito ergo sum.* The doubter's thinking proves his existence. I conclude that I am a substance whose existence is in thinking, and that there is no proof of the certainty of the first maxim to be adopted except that of a vision or consciousness as clear as this that I have of my own existence. » But in thinking of his own existence, he is immediately convinced of the limitations and imperfections of his mind from the fact of its imperfect knowledge of things causing him to doubt: hence he is led to infer the existence of a being who is perfect and without limitations; for it is impossible to conceive of imperfection without conceiving at the same time of perfection; and it is this perfect being alone which can be the cause of all other beings, since it must be the perfect which gives rise to imperfect and finite rather than that the imperfect should be the cause of the perfect. Hence we derive the idea of the being of God as the perfect being. But the idea of the perfection of anything involves that of its existence; hence Descartes concludes by a logic, whose validity has often been challenged, that the perfect being must exist; and hence, he holds, we are assured of the existence of God. The proof is strengthened also by the reflection that the idea itself of a perfect being could only have come into a finite mind from such a perfect source. The idea of God in the human mind at once implies the existence of God as the only possible source of this idea; and the idea of God as a perfect being without existence it would be impossible to conceive. Further, the knowledge now clearly attained of the existence of God shows us that God as perfect must be a beneficent being whose only object toward his creatures must be to enlighten and to bless them. Therefore, he would not create beings only to deceive them by making them subject necessarily to delusion. The evidence of the senses, therefore, as to the existence of an objective world which is as real and as certain as this certain world of thought, must be a true evidence. The external world exists as truly as the internal. But as external, it is utterly without thought and without consciousness. The created universe is, therefore, under God, who is the one perfect self-existent Substance, dual in its nature, or composed of two subordinate substances utterly discrete in their nature and incapable of any intercommunication. The one is the world of thought, the other the world of extension. To the one belong our minds, to the other our bodies. But while there can be no intermingling or community of those substances so absolutely unlike, yet there is in man a minute organ, the pineal gland in the brain, where the two alone come into such contact that, by a miraculous and constant intervention of deity, the action of the soul is extended into, or made coincident with, that of the body. This discreteness of the two planes, or degrees of substance, matter and thought, their perfect correspondence and their mutual influence by contiguity and not by continuity or confusion, forms one of the landmarks of modern philosophy, and is carried later by Swedenborg into a much more perfect development in his doctrine of Discrete Degrees and their Correspondence. The treatment of the problems of the mutual influx of these two degrees of substance, mind and matter, has been a distinguishing mark of subsequent schools of philosophy, culminating in the theory of parallelism, which is current at the present day. While Descartes accounts for the parallel action of these two utterly unlike and incommunicable substances by the supposed immediate operation of God upon both on the occasion of either being affected, his immediate follower Geulinx regards the coincident action of the two substances as divinely foreordained, so that the action of one accompanies that of the other, like the movements of the hands of two clocks made to run exactly alike, and yet in no way to interfere with one another. This is the theory of « pre-established harmony » applied by Leibnitz to his world of monads. Malebranche, however, another disciple of Descartes, held that the interaction of the two planes, in nature inexplicable, becomes possible through their hidden unity and harmony in God, in whom is all life and motion. Swedenborg, opposing with Descartes the doctrine of physical influx, sets forth the doctrine of a perfect « correspondence » of the discrete degrees of being, such that motions may be imparted by the contact of these degrees without any intermingling of their substance and by virtue of the harmony of their interior form, all exterior and material things being symbols and vessels of interior things.

With Descartes the lower animals and men as to their purely animal nature are perfect machines and form a part of the stupendous mechanism of the world. Man alone by virtue of his rational soul presides like an engineer in the midst of this vast machinery and governs the conduct of the body by the dictates of wisdom and virtue. Man's soul, a thinking principle, is composed of will and intellect, and the intellect is composed of partly innate and partly derived ideas. The thoughts of the finite mind must be imperfect, whereas the will partakes of the infinite freedom of God. The tendency of the human will is therefore to wander beyond that which it clearly sees in its own limited understanding, and hence from the abuse of the finite human thought arise error and sin. These privations suffered by human thought are however evidences of God's goodness and justice since the universe is more perfect for the multitude and variety of its imperfect parts. God is in every one of our clear thoughts, and so far as we abide by them in our judgments we are right; so far as in our own free will we transgress or exceed them we are in error and come into unhappiness. As regards the thought of God it is not the thought itself that effects the existence of God but the necessity of the thing itself determines us to have this thought. The thought of God being therefore the ground of all the certainty of any knowledge of anything, the truth of all science must depend on the knowledge of a true God. The soul's immortality is inferred in the sixth «Meditation» from the fact that we have a clear and distinct idea of thought, including sensations and willing, without anything material appertaining to it; hence its existence must be possible independent of the material body.

Such is an outline of Descartes' arguments in proof of the existence of God, and of his method of attaining to true knowledge. They are given in the «*Discours de la Méthode pour bien conduire le raison et chercher la Vérité dans les Sciences*,» published in the «*Essais Philosophiques*» at Leyden, 1637, and in the «*Meditationes de prima philosophia*, *ubi de Dei existentia et animæ immortalitate; his adjunctæ sunt variæ objectiones doctorum virorum in istas de Deo et anima demonstrationes cum responsionibus auctoris*,» published in Paris 1641; and in another edition in Amsterdam in 1642. A French translation of the «Meditations» by the Duke of Luynes and of the objections and replies by Clerselier, revised by Descartes, appeared in 1647. In 1644 appeared in Amsterdam the complete system of Descartes' philosophy under the title «*Renati Descartes Principia Philosophiæ.*» This, after a brief outline of the subjects discussed in the «Meditations,» deals with the general principles of Physical Science, especially of the laws of motion and the doctrine of the evolution of the universe through vortices in the primitive mass, resulting in the whirling of matter into spherical bodies, the falling or sifting through of angular fragments into the solid central bodies and the formation thence of matter and the firmament and planets. In this vortical theory of creation which anticipates that of Swedenborg, Kant, and Laplace, the method is that of deducing hypothetical causes from actual results or projecting the laws of creation backward from the known effect to the necessary cause. It differs from the theory of Swedenborg in producing the center from the circumference instead of animating the center or the first point with its motive derived from the infinite and thus developing all motions and forms from it. (See Swedenborg's «*Principia*,» Vol. I., chap II. «A Philosophical

Argument concerning the First Simple from which the World, with its natural things originated; that is concerning the first Natural Point and its existence from the Infinite.») The phenomena of light, heat, gravity, magnetism, etc., are also treated of. Descartes here while not venturing to openly oppose his rationalistic theory of the creation to that of the Bible, apologizes for suggesting the rational process, in that it makes the world more intelligible than the treatment of its objects merely as we find them fully created.

While rejecting the Copernican theory by name out of fear of religious opinion, he maintains it in substance in his idea of the earth as being carried around the sun in a great solar vortex.

In the «*Essais Philosophiques*» appeared also, together with the «*Discours de la Méthode*,» the «*Dioptrique*,» the «*Météores*,» and the «*Géométrie.*» The «Principles of Philosophy» were dedicated to the Princess Elizabeth, the daughter of the ejected elector Palatine, who had been his pupil at The Hague. To his later royal pupil, the Queen Christiana of Sweden, he sent the «Essay on the Passions of the Mind» originally written for the Princess Elizabeth and which was published at Amsterdam in 1650. The posthumous work, «*Le Monde, ou traité de la lumière*» was edited by Descartes' friend Clerselier and published in Paris 1664, also the «*Traité de' l'homme et de la formation de fœtus*,» in the same year by the same editor. It was this work with its bold theory of the Animal Spirit as being the mechanical principle of motion actuating the lower animals by means of pure mechanism, without feeling or intelligence on their part, that raised such an outcry among the enemies of Descartes and was not deemed safe to publish during his lifetime. In it occurs the graphic illustration of the animal system comparing it to a garden such as one sees in the parks of princes of Europe where are ingenuously constructed figures of all kinds which, on some hidden part being touched unawares by the visitor to the garden, the figures are all set in motion, the fountains play, etc. The visitors in the garden treading on the concealed machinery are the objects striking the organs of sensation; the water flowing through the pipes and producing motion and semblance of life is the animal spirit; the engineer sitting concealed in the center and controlling the whole is the rational soul.

"*Les Regles pour la direction de l'esprit*" which is thought to have been written in the years 1617–28 and to illustrate the course of Descartes' own philosophical development, and the "*Recherche de la vérité par les lumières naturelles*," were published at Amsterdam in 1701. A complete edition in Latin of Descartes' philosophical works was published in Amsterdam in 1850, and the complete works, in French, at Paris, edited by Victor Cousin, in 1824–26. In 1868 appeared, in Paris, "*Œuvres de Descartes*, *nouvelle edition precédée d'une introduction par Jules Simon.*"

Frank Sewall

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INTRODUCTION

INTRODUCTION.

I. Descartes—His Life and Writings.

The life of Descartes is best read in his writings, especially in that choice and pleasing fragment of mental autobiography, the *Discours de la Méthode.* But it is desirable to give the leading facts and dates of a career as unostentatious and barren of current and popular interest, as it was significant and eventful for the future of modern thought.

René Descartes was born on the 31st March, 1596. His birthplace was La Haye, a small town in the province of Touraine, now the department of the Indre et Loire. His family, on both sides, belonged to the landed gentry of the province of Poitou, and was of old standing. The ancestral estates lay in the neighborhood of Châtelleraut, in the plain watered by the Vienne, as it flows northward, amid fields fertile in corn and vines, to the Loire. The manor, called *Les Cartes*, from which the family derived its name, is about a league from La Haye. It is now embraced in the commune of Ormes-Saint-Martin, in the department of Vienne, which represents the old province of Poitou.

The mother of the philosopher was Jeanne Brochard, and his father was Joachim Descartes, a lawyer by profession, and a counsellor in the Parliament of Bretagne. This assembly was held in the town of Rennes, the old capital of the province, and there the family usually resided during the session. René was the third child of the marriage. The title of Seigneur du Perron, sometimes attached to his name, came to him from inheriting a small estate through his mother. His elder brother followed the father's profession, and became in his turn a counsellor of the Parliament of Bretagne. He seems to have been a proper type of the conventional gentleman of the time. So far from regarding it as an honor to be connected with the philosopher, he thought it derogatory to the family that his brother René should write books. This elder brother was the first of the family to settle in Bretagne, so that it is a mistake to represent Descartes as a Breton. He was really descended from Poitou ancestry.

In 1604, at the age of eight, he was sent to the recently-instituted Jesuit College of La Flèche. The studies of the place were of the usual scholastic type. He mastered these, but he seems to have taken chiefly to mathematics. Here he remained eight years, leaving the college in 1612. After a stay in Paris of four years, the greater part of the time being spent in seclusion and quiet study, at the age of twenty-one he entered the army, joining the troops of Prince Maurice of Nassau in Holland. He afterward took service with the Duke of Bavaria, then made a campaign in Hungary under the Count de Bucquoy. His insatiable desire of seeing men and the world, which had been the principal motive for his joining the army, now urged him to travel. Moravia, Silesia, the shores of the Baltic, Holstein, and Friesland, were all visited by him at this time. Somewhat later, in 1623, he set out from Paris for Italy, traversed the Alps and visited the Grisons, the Valteline, the Tyrol, and then went by Innsbruck to Venice and Rome. In the winter of 1619–20, when, after close thinking, some fundamental point in his philosophy dawned on his mind, he had a remarkable dream, and thereupon he vowed to make a pilgrimage to Loretto. There can be little doubt that he actually fulfilled his vow on the occasion of this visit to Italy, walking on foot from Venice to Loretto. He finally settled to the reflective work of his life in 1629, at the age of thirty-three, choosing Amsterdam for his residence. Holland was then the land of freedom — civil and literary — and this no doubt influenced his decision. But he also, as he tells us, preferred the cooler atmosphere of the Low Lands to the heat of Italy and France. In the former he could think with cool head, in the latter he could only produce phantasies of the brain.

Here, professing and acting on the principle, *Bene vixit bene qui latuit*, he meditated and wrote for twenty years, with a patience, force, and fruitfulness of genius which has been seldom equalled in the history of the world. His works appeared in the following order: *Discours de la*

Méthode pour bien conduire sa raison, et chercher la vérité dans les sciences; plus la Dioptrique, les Météores et la Géométrie, qui sont des Essais de cette Méthode. Leyden: 1637. This was published anonymously. Etienne de Courcelles translated the Method, Dioptrics, and Meteors into Latin. This was revised by Descartes, and published at Amsterdam in 1644. The Geometry was translated into Latin, with commentary, by Francis von Schooten, and published at Leyden, 1649. The Meditations were first published in Paris in 1641. The title was *Meditationes de prima Philosophia, in qua Dei existentia et animæ immortalitas demonstrantur.* In the second edition, published under the superintendence of the author himself at Amsterdam in 1642, the title was as follows: *Renati Descartes Meditationes de prima Philosophia, in quibus Dei existentia et animæ a corpore distinctio demonstrantur. His adjunctæ sunt variæ objectiones doctorum virorum ad istas de Deo et animæ demonstrationes cum responsionibus auctoris.* The Meditations were translated into French by the Duc de Luynes in 1647. The *Principia Philosophiæ* appeared at Amsterdam in 1644. The Abbé Picot translated it into French, 1647, Paris. The *Traité des Passions de l'Âme* appeared at Amsterdam in 1649.

Regarding the *Method* of Descartes, Saisset has very well said: « It ought not be forgotten that in publishing the *Method*, Descartes joined to it, as a supplement, the *Dioptrics*, the *Geometry*, and the *Meteors.* Thus at one stroke he founded, on the basis of a new method, two sciences hitherto almost unknown and of infinite importance — Mathematical Physics and the application of Algebra to Geometry; and at the same time he gave the prelude to the *Meditations* and the *Principles* — that is to say, to an original Metaphysic, and the mechanical theory of the universe. »

The appearance of the *Discours de la Méthode* marked an epoch not only in philosophy, but in the French language itself, as a means especially of philosophical expression. Peter Ramus, in his violent crusade against Aristotle, had published a Dialectic in French, but it was the *Discours de la Méthode* of Descartes which first truly revealed the clearness, precision, and natural force of his native language in philosophical literature. The use, too, of a vernacular tongue, immensely aided the diffusion and appreciation of the first great movement of modern thought.

Descartes, though a self-contained and self-inspired man, of marked individuality and a spirit of speculation wonderful for its comprehensiveness, had not the outspoken boldness which we are accustomed to associate with great reformers. He was not one, indeed, who cared to encounter the powerful opposition of the Church, to which by education he belonged. This is obvious from many things in his writings. He avoided, as far as possible, the appearance of an innovator, while he was so in the truest sense of the word. When he attacked an old dogma, it was not by a daring march up to the face of it, but rather by a quiet process of sapping the foundations. He got rid also of traditional principles not so much by direct attack as by substituting for them new proofs and grounds of reasoning, and thus silently ignoring them.

One little incident of his life shows at once the character of the man and of the times in which he lived, and the difficulties peculiar to the position of an original thinker in those days. He had completed the manuscript of a treatise *De Mundo*, and was about to send it to his old college friend Mersenne in Paris, with a view to arrange for its printing. In it he had maintained the doctrine of the motion of the earth. Meanwhile (November, 1633), he heard of the censure and condemnation of Galileo. This led him not only to stay the publication of the book, but even to talk of burning the manuscript, which he seems to have done in part. Descartes might no doubt have taken generally a more pronounced course in the statement of his opinions; but, looking to the jealous antagonism between the modern spirit represented by philosophy and literature on the one hand, and the old represented by theology on the other, during the immediately preceding period of the Renaissance and in his own time, it is doubtful whether such a line of action would have been equally successful in gaining acceptance for his new views, and promoting the interests of truth. An original thinker, with the recent fates of Ramus, Bruno, and Vanini before his eyes, to say nothing of the loathsome dungeon of Campanella, may be excused for being somewhat over-prudent. At any rate, it is not for us in these days to cast stones at a man of his character and circumstances. In these times singularity of opinion, whether it imply originality and judgment or not, is quite as much a passport to reputation with one set of people as the most pronounced orthodoxy is with another.

Even in Holland, however, he was not destined to find the absolute repose and freedom from annoyance which he sought and valued so highly. The publication of the *Method* brought down on him the unreasoning violence of the well-known Voët (Voëtius), Protestant clergyman at Utrecht, and afterward rector of the university there. With the characteristic blindness of the man of theological traditions, he accused Descartes of atheism. Voët allied himself with Schook (Schookius), of Groningen. The two sought the help of the magistrates. Descartes replied to the latter, who, in a big book, had accused him of scepticism, atheism, and madness. The influence of Voët was such that he got the magistrates to prepare a secret process against the philosopher. «Their intention,» says Saisset, «was to condemn him as atheist and calumniator: as atheist, apparently because he had given new proofs of the existence of God; as calumniator, because he had repelled the calumnies of his enemies.» The ambassador of France, with the help of the Prince of Orange, stopped the proceedings. Descartes is not the only, nor even the most recent instance, in which men holding truths traditionally cannot distinguish their friends from their foes.

Queen Christina of Sweden, daughter of the great Gustavus Adolphus, had come under the influence of the writings of Descartes. She began a correspondence with him on philosophical points, and finally prevailed upon him to leave Holland, and come to reside in Stockholm. He reached that capital in October, 1649. The winter proved hard and severe, and the queen insisted on having her lecture in philosophy at five in the morning. The constitution of the philosopher, never robust, succumbed to the climate. He died of inflammation of the lungs, on the 11th February, 1650, at the age of fifty-four. In 1666 his remains were brought to France and interred in Paris, in the church of Sainte-Geneviève. «On the 24th June, 1667,» says Saisset, «a solemn and magnificent service was performed in his honor. The funeral oration should have been pronounced after the service; but there came an order from the Court [in the midst of the ceremony] which prohibited its delivery. History ought to say that the man who solicited and obtained that order was the Father Le Tellier.» A finer illustration of contemporary narrowness before the breadth and power of genius could not well be found.

In 1796, the decree made by the Convention three years before, that the honors of the Pantheon should be accorded to Descartes, was presented by the Directory to the Council of the Cinq-Cents, by whom it was rejected. It was thus that the national philosopher of France was treated by ecclesiastic and revolutionist alike.

In 1819, the remains of Descartes were removed from the Court of the Louvre, whither they had been transferred from Sainte-Geneviève, to Saint-Germain-des-Prés. There Descrates now lies between Montfaucon and Mabillon.

II. Philosophy in the Fifteenth and Sixteenth Centuries Preceding Descartes.

The first step in the continuous progress to the principle of free inquiry, whose influence we now feel, was taken in the fifteenth century. This epoch presented for the first time in modern history the curious spectacle of the supreme authority in matters of thought and faith turned against itself. The principle of authority had been consecrated by scholasticism. During its continuance, intellectual activity was confined to methodizing and demonstrating the truths or dogmas furnished to the mind by the Church. No mediæval philosopher thought of questioning the truth of a religious dogma, even when he found it philosophically false or indemonstrable. The highest court of philosophical appeal in scholasticism was Aristotle; and the received interpretations of «the philosopher» had become identified with the dogmas sanctioned by the Church, and therefore with its credit and authority. But events occurred in the middle of the fifteenth century which tended to disparage the Aristotle of the Schools. Hitherto the writings of Aristotle had been known in Europe only through Latin translations, often badly and incompetently made from the Arabic and Hebrew. The emigration of learned Greeks from the empire of the East under the pressure of Turkish invasion, and finally the fall of Constantinople in 1453, led to the distribution of the originals of Aristotle over Italy, and the spread of the Greek language in Western Europe. With the knowledge thus acquired at first hand, Pomponatius (1462–1524 or 1526) disputed the dogmas of the Aristotle of the Schools and the Church. Henceforward the Aristotelians were divided into two Schools,—the Averroists or traditional interpreters, and the followers of "the Commentator," Alexander of Aphrodisias. Pomponatius was the head of the latter party. While still recognizing his authority as the highest, Pomponatius denied that the Aristotle which the Church accepted was the true one. The real Aristotle, according to his view, denied a divine providence, the immortality of the soul, and a beginning of the world; or, as he sometimes put it, Aristotle did not give adequate proof on those points. The philosopher and the Church were therefore in contradiction. This led to ardent discussion,—the opening of men's minds to the deepest questions,—the beginning, in a word, of free thought. And there was also the practical result, that the fifteenth-century philosopher denied what he as a Churchman professed to believe, or rather did not dare to disavow. It was obvious that the course of thinking could not rest here. It must pass beyond this, urged alike by the demands of reason and the interests of conscience.

But the inner spirit of scholasticism had pretty well worked itself out. It was a body of thought remarkable for its order and symmetry, well knit and squared, solid and massive, like a mediæval fortress. But it was inadequate as a representation and expression of the free life that was working in the literature, and even in the outside nascent philosophy, of the time. It was formed for conservation and defense, not for progress. New weapons were being forged which must inevitably prevail against it, just as the discovery of gunpowder had been quietly superseding the heavy panoply of the knight. Several thoughtful men were already dissatisfied alike with the Aristotle of the schoolmen and the manuscripts.

Opportunely enough, the circumstances which led to the discovery of the original Aristotle led also to the revelation of the original Plato. Some thinkers fell back on the earlier philsopher, stimulated to enthusiasm by the elevation of his transcendent dialectic. Notably among these were Pletho (born about 1390, and died about 1490); his pupil, Bessarion (1395 or 1389–1472); Giovanni Pico della Mirandola (the nephew of Francisco, born 1463, died 1494); Ficino, tutor to Lorenzo de Medici (1433-1499); Patrizi (1529–1597). Influenced a good deal by the spirit of mediæval mysticism, these thinkers for the most part clothed their Plato in the garb of Plotinus and the Neo-Platonists. Others were led to the still earlier Greek philosophers. The newly-awakened spirit of experience in Telesio (1508–1588) and in Berigard (1578-1667) found fitting nourishment in the Ionian physicists; and, later in the same line, Gassendi (1592–1655) revived Epicurus. All this implied the individual right of selecting the authority entitled to credence, and was a protest against scholasticism, and a step toward free inquiry.

The men of letters also helped to swell the tide rising strong against scholasticism. The abstract and often barbarous language of the schools appeared tasteless and repulsive alongside the rhythmic diction of Cicero, and the polished antitheses of Seneca. The spirit of imagination and literary grace had been repressed to the utmost in the schools. It now asserted itself with the intensity peculiar to a strong reaction. And in the knowledge and study of the forms of the classical languages, the mind is far beyond the sphere of mere deduction. It is but one remove from the activity of thought itself.

Mysticism, always operative in the middle ages, and indeed involved in the Neo-Platonism already spoken of, came to its height in the period of the Renaissance — especially under Paracelsus, (1493–1541) and Cardan (1501-1576) — and then under Boehm (1575–1624) and the Van Helmonts (father, 1577–1644, and son, 1618–1699). The principle of transcendent vision by intuition was in direct antagonism with the reasoned authority of scholasticism. Boehm's philosophy on its speculative side was an absolutism which anticipated Schelling, and Hegel himself. The self-diremption of consciousness is Boehm's favorite and fundamental point. The superstition which lay at the heart of the mysticism of the time, and which showed itself practically in alchemy, led men by the way of experiment to natural science, especially chemistry.

At length in the sixteenth century, and, as if to show the extreme force of reaction, in Italy itself before the throne of the Pope and the power of the Inquisition, there arose in succession Bruno (b. about 1550, d. 1600), Vanini (1581 or 85–1619), and Campanella (1568–1639) — all deeply inspired by the spirit of revolt against authority, and a freedom of thought that reached even a fantastic license. Bruno in the spirit of the Eleatics and Plotinus, proclaimed the absolute unity of all things in the indeterminable substance, which is God; Vanini carried empiricism to atheism and materialism; and Campanella united the extremes of high churchman and sensationalist, mystical metaphysician and astrologist.

The thoughts of this period, from the fifteenth to well on in the sixteenth century, have been described as «the upturnings of a volcano.» The time was indeed the volcanic epoch in European thought. The principal figures we can discern in it seem to move amid smoke and turmoil, and to pass away in flame. The tragic fate of Bruno in the fire at Rome, and that of Vanini in the fire at Toulouse — both done to death at the instance of the vulgar unintelligence of the Catholicism of the time — form two of the darkest and coarsest crimes ever perpetrated in the name of a Church. The Church, which claims to represent the truth of God, dare not touch with a violent hand speculative opinion. It is then false to itself.

In France, and in the university of Paris, the stronghold of Peripateticism, Ramus (1515–1572) attacked Aristotle in the most violent manner. In Ramus was concentred the spirit of philosophical and literary antagonism to the schoolmen. It was wholly unmodified by judgment or discrimination, and it did not proceed on a thorough or even adequate acquaintance with the object of its assault. Ramus is remarkable chiefly for the extreme freedom which he asserted in oratorically denouncing what he considered to be the principles of Aristotle; but he made no real advance either in the principles of logical method which he professed, or in philosophy itself. At the same time, the rude intensity and the passionate earnestness of his life were not unworthily sealed by his bloody death on the Eve of St. Bartholomew. The death of Ramus, though attributed directly to personal enmity, was really a blow struck alike at Protestantism and the freedom of modern thought.

Bruno, Vanini, Campanella, and Ramus foreshadowed Descartes and the modern spirit, only in the emphatic assertion of the freedom, individuality, and supremacy of thought. What in thought is firm, assured, and universal, they have not pointed out. They were actuated mainly by an implicit sense of inadequacy in the current principles and doctrines of the time. It was not given to any of them to find a new and strong foundation whereon to build with clear, consistent, and reasonable evidence. Campanella said of himself not inaptly: «I am but the bell (*campanella*) which sounds the hour of a new dawn.»

Alongside of those more purely speculative tendencies, Copernicus, Kepler, Galileo, and Bacon represented the new spirit and theory of observation applied to nature. The formalism of the Schools had abstracted almost entirely from the natural world. It was a «dreamland of intellectualism.» And now there came an intense reaction, out of which has arisen modern science. Bacon had given to the world the *Novum Organum* in 1620, seventeen years before the *Method* of Descartes, but his precept was as yet only slightly felt, and he had but little in common with Descartes, except an appeal to reality on a different side from that of the Continental philosopher. Descartes had not seen the *Organum* previously to his thinking out the *Method*. He makes but three or four references to Bacon in all his writings.

If to these influences we add the spirit of religious reformation, the debates regarding the relative authority of the Scriptures and the Church, and mainly as a consequence of the chaos and conflict of thought in the age, the course of philosophical scepticism initiated by Cornelius Agrippa (1486–1535), and made fashionable especially by Montaigne (1533–1592), and continued by Charron (1541–1603), with its self-satisfied worldliness and its low and conventional ethic, we shall understand the age in which the youth of Descartes was passed, and the influences under which he was led to speculation. We shall be able especially to see how he, a man of penetrating and comprehensive intelligence, yet with a strong conservative instinct for what was elevating in morals and theology, was led to seek for an ultimate ground of certainty, if that were possible, not in tradition or dogma of philosopher or churchman, but in what commended itself to him as self-verifying and therefore ultimate in knowledge—in other words, a limit to doubt, a criterion of certainty, and a point of departure for a constructive philosophy.

III. The Cogito Ergo Sum—Its Nature and Meaning.

The man in modern times, or indeed in any time, who first based philosophy on consciousness, and sketched a philosophical method within the limits of consciousness, was Descartes; and since his time, during these two hundred and fifty years, no one has shown a more accurate view of the ultimate problem of philosophy, or of the conditions under which it must be dealt with. The question with him is—Is there an ultimate in knowledge which can guarantee itself to me as true and certain? and, consequently upon this, can I obtain as it were from this—supposing it found—a criterion of truth and certainty?

In the settlement of these questions, the organon of Descartes is doubt. This with him means an examination by reflection of the facts and possibilities of consciousness. Of what and how far can I doubt. I can doubt, Descartes would say, whether it be true, as my senses testify, or seem to testify, that a material world really exists. I am not here by any necessity of thought shut within belief. I can doubt, he even says, of mathematical truths—at least when the evidence is not directly present to my mind. At what point then do I find that a reflective doubt sets limits to itself? This limit he finds in self-consciousness, implying or being self-existence. It will be found that this method makes the least possible postulate or assumption. It starts simply from the fact of a conscious questioning; it proceeds to exhaust the sphere of the doubtable; and it reaches that truth or principle which is its own guarantee. If we cannot find a principle or principles of this sort in knowledge, within the limits of consciousness, we shall not be able to find either ultimate truth or principle at all. Philosophy is impossible.

But the process must be accurately observed. There is the consciousness — that is, this or that act or state of consciousness — even when I doubt. This cannot be sublated, except by another act of consciousness. To doubt whether there is consciousness at a given moment, is to be conscious of the doubt in that given moment; to believe that the testimony of consciousness at a given time is false, is still to be conscious — conscious of the belief. This, therefore, a definite act of consciousness, is the necessary implicate of any act of knowledge. The impossibility of the sublation of the act of consciousness, consistently with the reality of knowledge at all, is the first and fundamental point of Descartes. This it is very important to note, for every other point in his philosophy that is at all legitimately established depends on this: and particularly the fact of the « I » or self of consciousness. The reality of the « I » or « Ego » of Descartes is inseparably bound up with the fact of the definite act of consciousness. But, be it observed, he does not prove or deduce the « Ego » from the act of consciousness; he finds it or realizes it as a matter of fact in and along with this act. The act and the Ego are the two inseparable factors of the same fact or experience in a definite time. But as the consciousness is absolutely superior to sublation, so is that which is its essential element or cofactor — in other words, the whole fact of experience — the conscious act and the conscious « I » or actor are placed on the same level of the absolutely indubitable.

By « I think » or by « thinking » Descartes thus does not mean thought or consciousness in the abstract. It is not *cogitatio ergo ens*, or *entitas*, but *cogito ergo sum;* that is, the concrete fact of me thinking. That this is so, can be established from numerous statements. « Under THOUGHT I embrace all that which is in us, so that we are immediately conscious of it.» «A thing which thinks is a thing which doubts, understands [conceives], affirms, denies, which wills, refuses, imagines also, and perceives.» Here thinking is as wide as consciousness; but it is not consciousness in the abstract; it is consciousness viewed

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in each of its actual or definite forms. From this it follows that the principle does not tell us what consciousness is; it knows nothing of an abstract consciousness, far less of a point above consciousness; but it is the knowledge and assertion of consciousness in one or other of its modes—or rather it is an expression of consciousness only as I have experience of it—in this or that definite form.

Arnauld and Mersenne in their criticism of Descartes were the first to point out the resemblance of the *cogito ergo sum* to statements of St. Augustin. Descartes himself had not previously been aware of these. The truth is, he belonged to the school of the non-reading philosophers. He cared very little for what had been thought or said before him. The passage from Augustin which has been referred to as closest to the statement of Descartes is from the *De Civitate Dei*, l. xi., c. 26. It closes as follows: «*Sine ulla phantasarium vel phantasmatum imaginatione ludificatoria, mihi esse me, idque nosse et amare certissimum est. Nulla in his veris Academicorum argumenta, formido dicentium: Quid, si falleris? Si enim fallor, sum. Nam qui non est, utique nec falli potest: ac per hoc sum, si fallor. Quia ergo sum, qui fallor, quomodo esse me fallor, quando certum est me esse si fallor?*» On this passage Descartes himself very properly remarks, that while the principle may be identical with his own, the consequences which he deduces from it, and its position as the ground of a philosophical system, make the characteristic difference between Augustin and himself. The specialty of Descartes is that he reached this principle of self-consciousness as the last limit of doubt and made it then the starting-point of his system. There is all the difference in his case, between the man who by chance stumbles on a fact, and leaves it isolated as he found it, and the man who reaches it by method—and, with a full consciousness of its importance, develops it through the ramifications of a philosophical system. To him the fact when found is a significant truth as the limit of restless thought; it is not less significant and impulsive as a new point of departure in the line of higher truth.

But what precisely is the relation between the *cogito* and the *sum?* Is it, first of all, a syllogistic or an immediate inference? Is the *cogito ergo sum* an enthymeme or a proposition?

There can be no doubt that Descartes himself regarded it as a form of proposition, an intuition, not a syllogism. In reply to Gassendi, who objected that *cogito ergo sum* implies *qui cogitat*, *est*,—a pre-judgment,—Descartes says: "The term PRE-JUDGMENT is here abused. Pre-judgment there is none, when the *cogito ergo sum* is duly considered, because it then appears so evident to the mind that it cannot keep itself from believing it, the moment even it begins to think of it. But the principal mistake here is this, that the objector supposes that the cognition of particular propositions is always deduced from universals, according to the order of the syllogisms of logic. He thus shows that he is ignorant of the way in which truth is to be sought. For it is settled among philosophers, that in order to find it a beginning must always be made from particular notions, that afterward the universal may be reached; although also reciprocally, universals being found, other particulars may thence be deduced." Again he says: "When we apprehend that we are thinking things, this is a first notion which is not drawn from any syllogism; and when some one says, I THINK, HENCE I AM, or I EXIST, he does not conclude his existence from his thought as by force of some syllogism, but as a thing known of itself; he sees it by a simple intuition of the mind, as appears from this, that if he deduced it from a syllogism, he must beforehand have known this major, ALL THAT WHICH THINKS IS OR EXISTS. Whereas, on the contrary, this is rather taught him, from the fact that he experiences in himself that it cannot be that he thinks if he does not exist. For it is the property of our mind to form general propositions from the knowledge of particulars." This is a clear statement of the non-syllogistic nature of the principle, and a distinct assertion of its intuitive character. It also points to the guarantee of the principle—the experiment of not being able to suppose consciousness apart from existence—or unless as implying it. This and other passages might have saved both Reid and Kant from the mistake of supposing that Descartes inferred self-existence from self-consciousness syllogistically or through a major.

It is said that in the *Principles* Descartes represents the *cogito ergo sum* as the conclusion of a reasoning; the major premise being that «to nothing no affections or qualities belong.» «Accordingly where we observe certain affections, there a thing or substance to which these pertain, is necessarily found.» Again, «substance cannot be first discovered merely from its being a thing which exists independently, for existence by itself is not observed by us. We easily, however, discover substance itself from any attribute of it, by this common notion, that of nothing there are no attributes, properties or qualities.» It seems to me that there is nothing in these statements, when carefully considered, to justify this assertion. In fact, the second statement that substance or being is not cognizable *per se*, disposes of any apparent ground for the syllogistic character of the inference. For this implies that the so-called major, as by itself incognizable, is not a major at all. What Descartes points to here, and very properly, is the original synthesis of the relation of quality and substance. «The common notion» is the reflective way of stating what is involved in the original primitive intuition; and is as much based on this intuition, as this intuition implies it. He here approximates very nearly to a distinct statement of the important doctrine that in regard to fundamental principles of knowing, the particular and the universal are from the first implicitly given, and only wait philosophical analysis to bring them to light.

But misrepresentation of the true nature of the *cogito ergo sum* still continues to be made.

« The 'therefore,' » says Professor Huxley, «has no business there. The 'I am' is assumed in the 'I think,' which is simply another way of saying 'I am thinking.' And, in the second place, 'I think,' is not one simple proposition, but three distinct assertions rolled into one. The first of these is '*something called I exists*,' the second is '*something called thought exists*,' and the third is '*the thought is the result of the action of the I*.' The only one of these propositions which can stand the Cartesian test of certainty is the second. It cannot be doubted, for the very doubt is an existent thought. But the first and third, whether true or not, may be doubted, and have been doubted; for the asserter may be asked, how do you know that thought is not self-existent, or that a given thought is not the effect of its antecedent thought or of some external power?»

The «therefore» has business there, as seems to me, until it is shown that immediate inference is no inference. The «I am» is not assumed in the «I think,» but implied in it, and explicitly evolved from it. Then the «I think,» though capable of being evolved into a variety of expressions, even different statements of fact, is not dependent on them for its reality or meaning, but they are dependent upon it. There are not three distinct assertions first, which have been rolled into one. On the contrary, the meaning and possibility of any assertion whatever are supplied by the «I think» itself. «Something called I exists,» is not known to me before I am conscious, but only as I am conscious. It is not a distinct proposition. «Something called thought exists,» is not any more a distinct proposition, for the thought which exists is inseparably my thought, and my thought is more than the mere abstraction «thought.» «The thought is the result of the action of the I» is not a fair statement of the relation between the «I» and thought, for there is no «I» known, first or distinct from thought, to whose action I can ascribe thought. The thought is me thinking. And the existence of thought could never be absolutely indubitable to me, unless it were my thought, for if it be but thought, this is an abstraction with which «I» have and can have no relation. «How do you know that thought is not self-existent?» that is, divorced from a me or thinker; for this reason simply, that such a thought could never be mine, or aught to me, or my knowledge. Thought, divorced from me or a thinker, would be not so much an absurdity as a nullity. «How do you know that a given thought is not the effect of its antecedent thought or of some external power?» Because as yet I have no knowledge of any antecedent thought, and if I had, I must know the thought and its antecedent thought through the identity of my consciousness; and thus relate both to the «I,» conscious, existing, and identical. And as to some external power, I must wait for the proof of it, and if I ever get it, it must be because I am there to think the proof, and distinguish it from myself as an external power. And further, this external power can only be known, in so far as I am conscious of it. Its known existence depends on my consciousness, as one factor in it, and therefore my consciousness could never be absolutely caused by it.

The *cogito ergo sum* is thus properly regarded by Descartes as a propostion. It is in fact, what we should now call a proposition of immediate inference,—such that the predicate is necessarily implied in the subject. The requirements of the case preclude it from being advanced as a syllogism or mediate inference. For in that case it would not be the first principle of knowledge, or the first stage of certainty after doubt. The first principle would be the major—ALL THAT THINKS IS, or THINKING IS EXISTING. To begin with, this is to reverse the true order of knowledge; to suppose that the universal is known before the particular. It is to suppose also, erroneously, a purely abstract beginning; for if I am able to say, I AM CONSCIOUS THAT ALL THINKING IS EXISTING, the guarantee even of this major or universal is the particular affirmation of my being conscious of its truth in a given time; if I am not able to say this, then I cannot assert that all or any thinking is existing, or indeed assert anything at all. In other words, I can connect no truth with my being conscious. I cannot know at all.

But what precisely is the character of the immediate implication? What is implied? There are four possible meanings of the phrase.

1. My being or existence is the effect or product of my being conscious. My being conscious creates or produces my being. Here my consciousness is first in order of existence.

2. My being conscious implies that I am and was, before and in order to be conscious.

3. My being conscious is the means of my knowing what my existence is, or what it means. Here my consciousness is identical with my existence. My consciousness and my being are convertible phrases.

4. My being conscious informs me that I exist, or through my being conscious I know for the first time that I exist. Here my being conscious is first in order of knowledge.

With regard to the first of these interpretations, it is obviously not in accordance with the formula. Implication is not production or creation. But, further, it does not interpret the *sum* in consistency with the *cogito.* If I am first of all supposed to be conscious, I am supposed to be and to exercise a function or to be modified in a particular form. It could hardly, consistently with this, be said that « I conscious » produce or create myself, seeing that I am already in being, and doing. This interpretation may be taken as a forecast of the absolute ego of Fichte, out of which come the ego and the non-ego of consciousness. There is no appearance of this having been the meaning of Descartes himself. And, indeed, it is not vindicable on any ground either of experience or reason.

With regard to the second interpretation, nothing could be further from the meaning of Descartes. I am conscious; therefore, I must be before I am conscious, or I must conceive myself to be before I am conscious. The inference in this case would be to my existence from my present or actual consciousness, as its ground and pre-requisite, as either before the consciousness in time, or to be necessarily conceived by me as grounding the consciousness. There are passages which seem to countenance this interpretation — *e. g.*, « In order to think, it is necessary to exist. » But in another passage he says, that ALL THAT THINKS EXISTS can only be known by experimenting in oneself and finding it impossible that one should be conscious unless he exist. This rather points to the view that the I AM of the formula is simply another aspect of the I AM CONSCIOUS — not really independently preceding it in time or in thought, but found inseparable from it in reality, though distinguishable in thought. That my existence preceded my consciousness, Descartes would be the last to maintain; that I was before I was conscious, he would have scouted as an absurdity. That another Ego — viz, Deity — might have been, even was, he makes a matter of inference from my being, revealed to me even by my being. But existence in the abstract, or existence *per se* as preceding me in any real sense, either as a power of creation or self-determination — whether in time and thought, or in thought only — he would have probably looked on as the simple vagary of speculation. He was opposed to the absolute ego as a beginning — the starting-point of Fichte — which as above conscious-

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[illegible] being

ness is above meaning. He was opposed equally to abstract or quality-less existence as a starting-point, which is that of the Logic of Hegel, whatever attempts may be made to substitute for it a more concrete basis — viz, consciousness. But for the intuitional knowledge of myself revealed in a definite act, it is obviously the doctrine of Descartes, and of truth, that I could not even propose to myself the question as to whether there is either knowledge or being; and any universal in knowledge is as yet to me simply meaningless.

With regard to the third interpretation, it seems to me not to be adequate to the meaning of Descartes, or the requirements of the case. It either does not say so much as Descartes means, or it says more than it professes to say. If it be intended to say MY CONSCIOUSNESS MEANS MY EXISTENCE in the proper sense of these words,—*i. e.*, in a purely explicative or logical sense — we have advanced not one step in the way of asserting MY EXISTENCE. We have but compared two expressions, and said that the one is convertible with the other. But we may do this whether the expressions denote objects of experience or not. This is a mere comparison of notions; and Descartes certainly intended not to find a simple relation of convertibility between two notions but to reach certainty as to a matter of experience or fact — viz, the reality of my existence. This interpretation, therefore, does not say so much as Descartes intends. But further, if instead of a statement of identity or convertibility between two notions it says that the one notion — viz, my being conscious — is found or realized as a fact, this is to go beyond the mere conception of relationship between it and another notion or element, and to allege the reality of my being conscious in the first instance, and secondly, its convertibility with my being. But in that case the formula of Descartes does not simply say MY CONSCIOUSNESS MEANS MY BEING. This interpretation might be stated in the form of a hypothetical proposition. If I am conscious, I am existing. But Descartes certainly went further than this. He made a direct categorical assertion of my existence. The decision of the question as to WHAT my existence is may be involved in the assertion THAT it is, but this is secondary, and, it may be, immediately inferential, but still inferential.

We are thus shut up to the fourth interpretation which, with certain qualifications, is, it seems to me, the true one.

My being conscious is the means of revealing myself as existing. In the order of knowledge, my being conscious is first; it is the beginning of knowledge, in time and logically. But it is not a single-sided fact: it is twofold at least. No sooner is the my being conscious realized than the my being is realized. In so far at least as I am conscious, I am. This is an immediate implication. But it should be observed that this does not imply either the absolute identity of my existence with my momentary consciousness, or the convertibility of my existence with that consciousness. For the « I conscious » or my being conscious, is realized by me only in a definite moment of time; and thus if my being were precisely identical and convertible with my being conscious in a single moment of time, the permanency of my being through the conscious moments would be impossible. « I » should simply be as a gleam of light, which no sooner appeared than it passed away, and as various as the play of sunshine on the landscape. All, therefore, that can be said, or need be inferred, is that my existence, or the me I know myself to be, is revealed in the consciousness of a definite moment; but I am not entitled to say from that alone that the being of me is restricted to that moment, or identified absolutely with the content of that moment. Nay, I may find that the identity and continuity of the momentary ego are actually implied in the fact that this experience of its existence is not possible except as part of a series of moments or successive states. In this case, there would be added to the mere existence of the ego its identity or continued existence through variety or succession in time. Thus understood, the *cogito ergo sum* of Descartes is the true basis of all knowledge and all philosophy. It is a real basis, the basis of ultimate fact; it provides for the reality of my conscious life as something more than a disconnected series of consciousnesses or a play of words; it opens up to me infinite possibilities of knowledge; the reality of man and God can now be grasped by me in the form of the permanency of self-consciousness.

IV. COGITO ERGO SUM — OBJECTIONS TO THE PRINCIPLE.

IT HAS been objected to the formula of Descartes, that it does not say what the *sum* or *existo* means; and further, that existence *per se* is a vague, even meaningless expression, and that to become a notion at all, existence must be cognized in, or translated into, some particular attribute, to which the term existence adds no further meaning than the attribute already possesses. This twofold objection seems to me to be unfounded.

When it is said I AM, it is not meant that I am indefinitely anything, but that I am this or that, at a given time. In consciously asserting that I am, I am consciously energizing in this or that mode. I am knowing, or I am feeling and knowing, or I am knowing and willing. This is a positive form of being. I am not called upon to vindicate the reality of existence as an abstract notion or notion *per se*, or even in its full extension. I merely affirm that in being conscious, I am revealed or appear as an existence or being,— a perfectly definite reality, but not all reality,— all possible or imaginable reality, though participating in a being which is or may be wider than my being.

Nor are the attempts that have been made to find the express form of existence, which Descartes is held necessarily to mean, more successful than the general criticism. « I exist is meaningless » it is said, « unless it be convertible with, or translated into some positive attribute. » « I think, therefore I live »— this would be intelligible. But Descartes's answer to this would be very much what he said in reply to Gassendi, who, following precisely the same line of thought, suggested *ambulo ergo sum*. Unless the living or the walking be a fact of my consciousness, it is nothing to me, and is no part of my existence or being. Life is wider than consciousness,— at least if it is to be in any form identical with my being, it must be conscious life, just as it must be conscious walking.

But the second suggested interpretation is still worse. « I think, therefore, I am something » (*i. e.*, either subject or object, I do not know which). Nothing could be further from the meaning of Descartes than this, as is indeed admitted, or from the truth of the matter. I am not SOMETHING, that is, a wholly indefinite. I am as I think myself to be, as I am conscious in this or that definite mode, as I feel, apprehend, desire, or will. Being thus definitely conscious, I am not a mere indeterminate something. I am something simply because in the first place I know myself to be definitely this thing — myself. And as I know myself to be cognizant, I know myself to be definitely the knower, or, if you will, the subject. But the only object necessary to my knowledge in this case is a subject-object, or one of my own passing states. I require nothing further in the form of a not-self, in order to limit and render clear my self-knowledge. A mere sensation or state of feeling apprehended by me as mine is enough to constitute me a definite something.

Besides the alleged vagueness or emptiness of the term *sum* in the formula, there is a twofold objection,— one that it is not a real inference; the other that it is not a real proposition. It seems odd that it can be supposed possible for the same person to object to it on both of these grounds. It may be criticised as a syllogism, and it may be criticised as a proposition; but surely it cannot be held to admit of both these characters. If it can be proved to be not a real proposition to begin with, it is superfluous to seek to prove it an unreal inference. First, it is interpreted thus: «I think, therefore I am mind,— I am not the opposite of mind, I am a definite or precise something.» It is alleged there is no real inference here, for «the meaning of think contains the meaning of mind.» «I think» only contains «mind» if it be interpreted as meaning consciousness and all its contents — if it means all the acts of consciousness and the ego of consciousness. In this case the «I think, I AM mind» would be no syllogistic or mediate inference. But the statement would neither be tautological nor useless; it would be a proposition of immediate certainty, in which the subject explicated involved a definite being as another aspect of itself. And this meets the objection to the formula as a proposition. It is said to be not a real proposition, seeing that the predicate adds nothing to the subject. This, in the first place, is not the test of a real proposition, or of what is essential to a proposition. A proposition may be simply analytic, and yet truly a proposition. All that is necessary to constitute a proposition is that it should imply inclusion or exclusion, attribution or non-attribution. When I explicate FOUR into the equivalent of 1 1 1 1, I have not added to the meaning of the subject, but I have identified a whole and its parts by a true propositional form. I have analyzed no doubt merely, but truly and necessarily, and the result appears in a valid proposition. So starting from « thinking » in the sense of consciousness, I analyze it also into ACT and ME, and permanent ME, and I thus do a very proper and necessary work. But I do more, for I assert definitude of being in the thinking or consciousness,—and this, though inseparable from it in reality, is at least distinguishable in thought. This constitutes a real predicate, and a very important predicate, which excludes on the one hand a mere act or state, mere « thinking » as apart from a self or me, and an absolute me or self, apart from an act of thought. It excludes, in fact, Hume on the one hand and Fichte on the other.

But waving this, it is alleged that to say « I think,» is mere redundancy, seeing that « I » already means « thinking,» which is a function, among others, of man. The proposition is therefore merely verbal or analytic. But how do I know that « I » already means « thinking,» or that thinking is implied in « I »? By some test or other—by some form of experience. And what can this be but by the « I » being conscious of itself as thinking? And what is this but falling back upon the principle of the *cogito ergo sum* as the ultimate in knowledge?

It seems further to be imagined that a real inference could be got if the formula of Descartes were interpreted as meaning « I think, therefore I feel, and also will,» for experience shows that these facts are associated. This would give the formula importance and validity. Surely there is a misconception here of what Descartes aimed at, or ought to have aimed at. Before I can associate experience, « I feel » and « I will » with « I think,» I must have the « I think » in some definite form. This must guarantee itself to me in some way; that is the question which must be settled first; that is the question regarding the condition of the knowledge alike of feeling and willing. It was nothing to the aim of Descartes what was associated in experience; he sought the ultimate form, or fact, if you choose, in experience itself, and his principle must be met, not by saying that it only gives certain real inferences through subsequent association and experience, but by a direct challenge of the guarantee of the principle itself — a challenge which indeed is incompatible with its being the basis of any real inference.

To the *cogito ergo sum* of Descartes it was readily and early objected, that if it identified my being and my consciousness, then I must either always be conscious, or, if consciousness ceases, I must cease to be. Descartes chose the former alternative, and maintained a continuity of consciousness through waking and sleeping. As a thinking substance, the soul is always conscious. Through feebleness of cerebral impression, it does not always remember. What wonder is it, he asks, that we do not always remember the thoughts of our sleep or lethargy, when we often do not remember the thoughts of our waking hours? Traces on the brain are needed, to which the soul may turn, and it is not wonderful that they are awanting in the brain of a child or in sleep. THAT THE SOUL ALWAYS THINKS, was his thesis; and it was to this point that the polemic of Locke was directed. Whether consciousness be absolutely continuous or not — whether suspension of consciousness in time be merely apparent, — is a mixed psychological and physiological question. But it is hardly necessary to consider it in this connection; and Descartes probably went too far in his affirmative statement, and certainly in allowing it as the only counter-alternative. For consciousness must not be interpreted in the narrow sense of the conscious act merely, or of all conscious acts put together. That would be an abstract and artificial interpretation of consciousness. That is but one side of it; and we must take into account the other element through which this conscious act is possible, and which is distinguishable but inseparable from it. This is the «I» or «Ego» itself. When we seek to analyze MY BEING, or MY BEING CONSCIOUS, we must keep in mind the coequal reality or necessary implication of self and the conscious act, and keep hold of all that is embodied in the assertion of the self by itself. This we shall find to be existence in time in this or that definite act or mode, and a continuous and identical existence through all the varying and successive modes of consciousness in time. The variation and succession of the modes of consciousness do not affect this identical reality, and no more need the suspension do, even though the suspension of the mode were proved to be absolute, and not simply such a reduction of degree as merely to be below memory.

identity in a different dimension from time

In our experience we find that after at least an apparent absolute suspension of consciousness, the I, or self, on the recovery of consciousness, asserts itself to be identical with the I, or self, of the consciousness that preceded the suspension. There is more than a logical or generic identity. It is not that there is an «I» in consciousness before the suspension and an «I» also after it; but these are held by us to be one and the same. The temporary state of unconsciousness is even attributed to this identical «I.» It is supposed to have passed through it. It is quite clear, accordingly, that the being of the «I,» or self, is somehow not obliterated by the state of unconsciousness through which it passes.

It is here that psychology and physiology touch. The bodily organism, living and sentient, is the condition and instrument of consciousness. The temporary manifestation of consciousness is dependent on physical conditions. Consciousness may be said to animate the body; and the body may be said to permit the manifestation of consciousness. But there is the deeper element of the Ego or self which is the ground of the whole manifestations, however conditioned. Through a non-fulfilment of the physical requirements, these manifestations may be absolutely suspended, or at least they may sink so low in degree, as to appear to be so; they may subside to such an extent as not to be the matter of subsequent memory; but the Ego may still survive, potentially if not actually existent; capable of again manifesting similar acts of consciousness, continuous and powerful enough to assert its existence and individuality, in varying even conflicting conscious states, and to triumph over the suspension of consciousness itself.

The deductive solution which has been given of this question does not meet the point at issue. It is said that though I am not always conscious of any special act or state, I am yet always conscious: for, except in consciousness, there is no Ego or self, and where there is consciousness there is always an Ego. This self, therefore, exists only as it thinks, and it thinks always. To say that the Ego does not exist except in consciousness, and to say that it exists always, is to say either that consciousness always exists, or to say that when consciousness does not exist, the Ego yet exists, which is a simple contradiction, or to say that consciousness being non-existent, the Ego neither exists nor does not exist, which is equally incompatible with its existing always. In fact, the two statements are irreconcilable. If the Ego does not exist except in consciousness, it can only exist when consciousness exists; and unless the continued existence of consciousness is guaranteed to us somehow, the Ego cannot be said to exist always. If the statement is meant as a definition of an Ego, the conclusion from it is tolerably evident: in fact, it thus becomes an identical proposition. An Ego means a conscious Ego; therefore there is no Ego except a conscious one. Still, it does not follow that there is always a conscious Ego, or that an Ego always exists. The existence of the Ego in time at all is still purely hypothetical, much more its continuous existence. Such a definition no more guarantees the reality of the Ego, than the definition of a triangle calls it into actual existence.

But what is the warrant of this definition? Is it a description of the actual Ego of my consciousness? Or is it a formula simply imposed upon actual consciousness? It cannot be accepted as the former, for the reason that it is a mere begging of the question raised by reflection regarding the character of the actual Ego of consciousness. The question is — Is it true or not, as a matter of fact, that THE Ego which I am and know now or at a given time survives a suspension of consciousness? It seems at least to do so, and not to be merely AN Ego which reappears after the suspension. To define the actual Ego as only a conscious Ego is to beg and foreclose the conclusion to be discussed. The definition thus assumes the character of a formula imposed, and arbitrarily imposed, upon our actual consciousness.

Let it be further observed that this doctrine does not even guarantee the continuous identity of the Ego, through varying successive states of consciousness. It cannot tell me that the Ego of a given act of consciousness is the one identical me of a succeeding act of consciousness. All that it truly implies is that in terms of the definition AN Ego is correlative with A consciousness; but it does not guarantee to me that the Ego of THIS definite time is the Ego of the second definite time. It might be construed as saying NO to this, and implying that logical identity is really all. But it does not, in fact, touch the reality of time at all. This is an abstract definition of an Ego, and a hypothetical one. The Ego of our actual consciousness may possess an identity of a totally different sort from that contemplated in this definition; and therefore, as applied to consciousness in time, it either settles nothing, or it begs the point at issue.

In fact, it is impossible to dispense with the intuitions of self-existence and continuous self-existence in time, whatever formula we state. Our existence is greatly wider than conciousness, or than phenomenal reality; we are and we persist amid the varieties, suspensions, and depressions of consciousness — a mysterious power of selfhood and unity, which, while it does not transcend itself, transcends at least its own states of being.

V. THE GUARANTEE OF THE PRINCIPLE.

Now, the question arises, What precisely is the guarantee of this position, — the *cogito ergo sum?* It may be said simply individual reflection, individual test, trial, or experiment, on the processes of knowledge — analytic reflection carried to its utmost limit. But it may be urged this is wholly an individual experience, and it cannot ground a general rule or law for all human knowledge, far less for knowledge in general. It is true that this experiment of Descartes is an individual effort, and all true philosophy is such. This is essential to speculation in any form. The individual thinker must realize each truth as his own and by his own effort. But it is possible for the individual proceeding by single effort to find, and to unite himself with, universal truth. Thus only, indeed, can he so unite himself. It is the quickened intellect in living quest which makes the conquest. Doctrine held in any other way, even when it is truth, is a sapless verbalism. Now, what is the law or ground of the conviction that MY BEING CONSCIOUS is impossible unless AS I AM? Simply the principles of identity and non-contradiction, evidencing themselves in a definite form and application —asserting their strength, but as yet to Descartes only in a hidden way—implicitly, not explicitly. MY BEING CONSCIOUS is MY BEING—my being for the moment. If I try to think my being conscious without also thinking my being, I cannot. And as these are thus in the moment of time identical, it would be a contradiction to suppose me being conscious without me being. Thus is my momentary existence secured or preserved for thought.

Whether I can go beyond this and predicate the identity of my being or of me as being all through successive moments, is of course not at once settled by this position. But it is not foreclosed by it, and it is open to adduce the proper proof of the continuous identity, if this can be found.

This, as seems to me, is what is implied as the guarantee of the first principle of Descartes. He has not himself, however, developed it in this way, for the reason chiefly that he did not recognize the principle of Non-Contradiction as regulating immediate inference. There is a little noticed but significant passage in which he touches on this law, in a letter to Clerselier. Referring to that which we ought to take for THE FIRST PRINCIPLE, he says: "The word PRINCIPLE may be taken in diverse senses, and it is one thing to seek a COMMON NOTION which is so clear and so general that it may serve as a principle to prove the existence of all beings, the *entia* which one will afterward know; and it is another thing to seek a being, the existence of which is more known to us than that of any others, so that it may serve us as principle for knowing them. In the first sense it may be said that IT IS IMPOSSIBLE FOR THE SAME THING AT ONCE TO BE AND NOT TO BE is a principle, and that it may serve generally, not properly to make known the existence of anything, but only to cause that when one knows it one confirms the truth of it by such a reasoning,—IT IS IMPOSSIBLE THAT WHAT IS SHOULD NOT BE; BUT I KNOW THAT SUCH A THING IS; HENCE I KNOW

THAT IT IS IMPOSSIBLE IT SHOULD NOT BE. This is of little importance, and does not make us wiser. In the other sense, the first principle is THAT OUR SOUL EXISTS, because there is nothing the existence of which is more known to us. I add also that it is not a condition which we ought to require of the first principle, that of being such that all other propositions may be reduced to and proved by it; it is enough that it serve to discover several of them, and that there is no other upon which it depends, or which we can find before it. For it may be that there is not any principle in the world to which alone all things can be reduced; and the way in which people reduce other propositions to this, — *impossibile est idem simul esse et non esse*, — is superfluous and of no use; whereas it is with very great utility that one commences to be assured of THE EXISTENCE OF GOD, and afterward of that of all creatures, BY THE CONSIDERATION OF HIS OWN PROPER EXISTENCE.»

This shows, on the whole, that Descartes had not fully thought out his own position. He had most certainly well appreciated the true scope of the principle of non-contradiction, as incapable of yielding a single fact or new notion. In this he showed himself greatly in advance of many nineteenth-century philosophers. And he showed also his thorough apprehension of the fact that the true principle of a constructive philosophy lies not in mere identity, or in the preservation of the consistency of a thought with itself, but in its affording the ground of new truths. His view is, that ere the principle of non-contradiction can come into exercise at all, something must be known. And any one who really puts meaning into words cannot suppose for a moment anything else. All this should be fully and generously recognized as evidence of a thoroughly far-seeing philosophical vision. At the same time, he does not see the negative or preservative value of the principle — and the need of it as a guard for the fact of self-consciousness as being self-existence for the moment, which he finds in experience. It is this principle alone which, supervening on the intuition, makes it definite or limited — a positive — shut out from the very possibility of being identified with any opposite or negative, although this may be implied in its very conception.

The first truth of Descartes—being conscious, I am—is thus not properly described as, in the first instance, a universal in knowledge. It is a definite particular or individual fact, guaranteed by its necessity, by the impossibility of transcending definite limits, and in this necessity, or through the consciousness of it, is the universality connected with the fact revealed. But for the conscious necessity, I could never either know the universality, or guarantee to myself this universality, for I have as yet but knowledge of one actual case, whatever extension my conception may assume in and through it; and but for the necessity, I could never assert the universality—BEING CONSCIOUS, I AM; BEING CONSCIOUS, EACH IS.

Descartes expressly anticipated this misapprehension, and strove to correct it. Nothing can be more explicit than his view that the necessity is first, and that this is, as it can only be, the guarantee of the universality. If a universal, it must be a mere abstract universal to begin with, in which case it can be applied neither to my existence nor to my existence at a given time. It must be a universal too, surreptitiously obtained, for it is a universal of thought and being which I have never known or consciously realized in any individual case. And if I have not done this, I cannot know it to be applicable to any case, far less to all cases. It is thus an empty and illegitimate abstraction, which can tell me nothing, because it wholly transcends any consciousness.

Further, the conviction which we get of the necessary connection between self-consciousness and self-existence is not due to the knowledge of the general formulæ of identity and non-contradiction—viz, A is A, and A = not-A = O. But, on the other hand, the necessity of those formulæ is realized by us in the definite instance itself. This is as true and certain to us as is the general formula or law which it exemplifies. Nay, we can only in the instance find for ourselves or test the necessity of the formula itself. We do not thus add to the certainty of our conviction of the truth in the particular instance by stating the general formula; we only draw out, as it were, of the particular case, and then describe that most general form on which reflection shows us this already perfect conviction rests. It is, therefore, idle to talk of evolving the particular truth from the universal formula;

for the latter is nothing to us until it is found exemplified in the particular instance. Nor is it of any greater relevancy to say that self-consciousness is deduced from consciousness in general or the idea of consciousness; for, on exactly the same principle, we know nothing of such a general consciousness unless as exemplified in this primary self-consciousness. This is as early in thought and in time as the idea of consciousness in general, or of the Ego in general, or an infinite self-consciousness, whatever such an ambiguous phrase may, according to the requirements of an argument, be twisted to mean.

And this consideration should be fatal to the view or representation that there is here a « determination » by the thinker, or by « thought » which, by the way, seems capable of dispensing with a thinker altogether. « To determine » is a very definite logical phrase, which has and can have but one clear meaning. The mind determines an object when it classifies the materials of sense and inward experience; and when, descending from higher genera, it evolves species and individuals, through knowledge of differences extraneous to the genera themselves. Whatever be implied in these processes, it is clear at least that « determination » is a thoroughly conscious process; and it is further a secondary or reflective process. When we refer any given object to a class, and thus fix or determine it for what it is, we suppose the possession by us of a prior knowledge — knowledge of a class constituted and represented by objects — and knowledge too, of this or that object of thought, which we now refer to the class. In this sense it is quite clear that Descartes could not be supposed « to determine » his experience, either as to the conscious act, or as to the limits under which it was conceivable by him, for his procedure was initiative, and he is not gratuitously to be supposed in conscious possession of knowledge before the single conscious act in which knowledge is for the first time realized. Besides, determination implies a consciousness of generality — in this case even universality — of law and limit of which he could not possibly be conscious, until he became aware of them in the very act of his experimental reflection. Even the most general form of determination — that of regarding an object as such — can arise into consciousness only reflectively through the first experience of this or that object in which the notion of object is at once revealed and emphasized. Nay, if, according to a possible but disputable interpretation of Kant, perception being « blind » and conception « empty, » the former is not a species of knowledge at all, and has no separate object: and if conception be equally void of object, and yet always needed to make even an object of knowledge, determination is an absurdity; for the understanding or mind as exercising this function must in this case be supposed able to determine or clothe in category that which is as yet not an object of consciousness at all. It must be able to act, though it is assumed as entirely empty and incapable of filling itself with content. There are but two alternatives here — either the so-called « manifold of sensation » is not matter of consciousness, or it is. If the former, then the empty and uninformed understanding can make an object of what is not in any way supplied to it — it can combine into unity what is beyond consciousness itself; or if this « manifold » be in consciousness by itself, it can be so without being known, — consciousness of the manifold may exist without knowledge of the manifold — that is, without knowledge of its object. We have thus a complexus of absurdity. The understanding can make a synthesis of a « manifold » which is never within its ken; and it can be conscious of a universal which, as the cofactor of the unconstituted object, is not yet in knowledge. Nothing need be said of the absurdity of describing « the manifold » of perception when perception has no distinctive object at all, but receives its object from conception. And the « manifold » of perception, while it supposes always a unity and a series of points at least, is about the most inapplicable expression which it is possible to apply to the sensations of taste, odor, sound, and tactual feeling. In these, as sensations, there is no manifold; each is an indivisible attribute or unity. These may, no doubt, constitute a manifold through time and succession; but they can do so only on condition of being separately apprehended in time as objects or points. The manifold of sense even cannot be a manifold of non-entities or unconscious elements. But the problem of analyzing object or thing is an impossible one from the first. Of what is ultimately an object for consciousness, we cannot state the elements, without being conscious of each element as an object. If we are not conscious of each element as an object by itself, as distinguished from each other element which enters into the object, we cannot know what the elements are which make up any object of consciousness. We have not even consciousness or knowledge at all. We cannot specify either the mutual relations or the mutual functions of the elements. If we are conscious of each element by itself and of its functions, we have an object of knowledge, prior to the constitution of the object of knowledge — the only object supposed possible. «Thing» or «object» or «being» is ultimately unanalyzable by us, seeing that our instrument of analysis is itself only possible by cognizing thing or being in some form, — by bringing it to the analysis. WHAT things are we can tell, — what sorts of things as they stand in different relations to each other, and to us; but the ground of the possibility of this is thing or object itself, given in inseparable correlation with the act of consciousness.

The truth is that this theory of determination proceeds on the confusion of two kinds of judgments which are wholly distinct in character, the logical and psychological. The logical judgment always supposes two ideas of objects known by us. It comes into play only after apprehension of qualities, and is simply an application of classification or attribution. The subject of the judgment is thus determined as belonging to a class, or as possessing an attribute; but subject, class, and attribute are already in the mind or consciousness; only they are as yet neither joined nor disjoined. This kind of judgment is a secondary and derivative process, and has nothing to do with the primitive acts of knowledge. The psychological or metaphysical judgment, if the name be retained, with which knowledge begins, and without which the logical judgment is impossible — does not suppose a previous knowledge of the terms to be united. It is manifested in self-consciousness and in perception. In it knowledge and affirmation of the present and momentary reality are identical. As I am conscious of feeling, so I am affirming the reality of my consciousness or existence. As I touch extension, so I affirm the reality of the object touched. In no other way can I reach the reality either of self or not-self. To suppose that I reach it by comparing the notions of self and existence, or of extension and existence — is to suppose an absolutely abstract or general knowledge of ME and BEING, in the first instance, that I may know, in the second instance, whether I can join them together, and they therefore exist. But this supposes that I can have this abstract knowledge by itself, apart from individual realization. It supposes also that I can have this before I know its embodiment in the concrete at all, and finally it fails to give me the knowledge I seek — for it only, at the utmost, could tell me that the ideas of ME and EXISTENCE are not incongruous or contradictory — whereas what I wish to know is whether I actually am. On such a doctrine MY EXISTING must mean merely an ideal compatibility.

In a word, determination of things by thought, as it is called, supposes a system of thought or consciousness. It supposes the thinker to be in possession of notions and principles, and to be consciously in possession of them. Otherwise it is a blind and unconscious determination done for the thinker, and not by him, and the thinker does not know at all. But if the thinker is already in possession of such a knowledge, we have not explained the origin of knowledge or experience; we have only referred it to a pre-existing system of knowledge in consciousness. If, therefore, we are to show how knowledge rises up for the first time, we must look to what is before even this system. But before the general or generalized — as an abstraction — we have only the concrete individual instance,— the act of consciousness in this or that case. Either, therefore, we beg a system of knowledge, or we do not know at all, or we know the individual as embodying the general or universal for the first time.

The intuition of self and its modes no doubt involves a great many elements or notions, not obvious at first sight. It involves unity, individuality, substance, relation; it involves identity, and difference or discrimination of subject and object, of self and state. These notions or elements analytical reflection will explicitly evolve from the fact, as its essential factors. Some are disposed to call these presuppositions. I have no desire to quarrel with the word. They are presuppositions in the sense of logical concomitance, or correlation. The fact or reality embodies them; they are realized in the fact. The fact is, if you choose, reason realized. But they are not presuppositions, in the sense of grounds of evolution of the fact in which we find them. They are in it, and elements of it; but the fact is as necessary to their realization and known existence as they are to it. You cannot take these by themselves, abstract them, set them apart, and evolve THIS or THAT individuality out of them. You cannot deduce the reality or individuality of an Ego from them — the Ego I find in experience or consciousness — because this very reality is necessary to their realization or being in thought at all. There is no relation or subordination here. It is co-ordination, or better, the correlation of fact and form,— of being and law of being.

We can thus also detect how much, or rather how little, truth there is in current Hegelian representations of the first principle and position of Descartes in philosophy, when we are told that « Descartes is the founder of a new epoch in philosophy because he enunciated the postulate of an entire removal of presupposition. This absolute protest maintained by Descartes against the acceptance of anything for true, because it is so given to us, or so found by us, and not something determined and established by thought, becomes thenceforward the fundamental principle of the moderns.» «An entire removal of presupposition,» if by that be meant of postulate, is not possible on any system of philosophy. No presuppositionless system can be stated in this sense, without glaring inconsistency. It is *ab initio* suicidal. I must be there to think, that is, I must be conscious where there is the possibility of either truth or error; and the intelligible system developed must have an undeduced basis in my consciousness, guaranteed by that consciousness. And in regard to the Hegelian or most pretentious attempt of this sort, it could readily be shown that the method or dialectic is in no way contained in the basis,— or is even the native law of the deduction. As such it is borrowed, not deduced. Definite thought is always necessarily postulated; otherwise there is neither affirmation nor negation. This Descartes accepted; and on this necessary assumption, in no way arbitrary, but self-guaranteeing, his philosophy was based.

As to the phrase, «something determined and established by thought,» this is as inappropriate an expression as could well be imagined. What is the «thought» which determines or establishes things for us? Is it «thought» divorced from any consciousness? Is it thought realized by me in and through my consciousness? It is apparently not what is found or given, but what determines or establishes. But is this a thing by itself, this thought,—is it a power in the universe working alone and by itself? Apparently so. If thought determines and establishes things it is a very definite and practical power. But then do I, or can I, know this thought which is obviously superior to me and the first act of self-consciousness? How can I speak of thought at all as a determining power for me, when as yet I am neither conscious nor existent? If there were a system of knowledge above knowledge, known to me—or a system of thought above my thought, thought by me—or a consciousness above my consciousness, of which, or in which, I was conscious before my consciousness,—then I could accept the determination by thought of all truth for me. But as it is, until I can reconcile to the ordinary conditions of intelligibility this fallacy of doubling thought or knowledge, I must give up the experiment as a violation of good sense and reason. Determination by thought either means that I am already in conscious possession of knowledge (in which case I presuppose knowledge to account for knowledge), or it means that something called thought, which is not yet either me or my consciousness, or even consciousness at all, determines me and my consciousness, in which case I cannot know anything of this process of determination, for *ex hypothesi* I neither am nor am conscious until I am determined to be so. To know or be consciously determined by this thought, I must be in it actually and consciously from the first, in which case I know before I know, and I am before I am, or I must be in it potentially from the first—that is, unconsciously, in which case I am able to keep up all through the process of determination a continuity of being between unconsciousness and consciousness, and to retain a memory of that which I never consciously knew. To connect myself and my consciousness in this way with such a determining thought, or something, is a simple impossibility.

The fallacy in all this lies in the suggestion of the phrase «to determine.» This is ambiguous, or rather it has a connotation which is fallacious, or helps fallacious thought. To determine is ultimately to conceive, or limit by conception — *i. e.*, to attach a predicate to a subject. But to determine may easily be taken to mean fixing as existent — not merely as a possible object of experience, but as a real or actual object. And in this sense it is constantly used — especially at a pinch when it is necessary to identify the ideal possibility of an object of thought with its reality. To assert existence of a subject, and to inclose it in a predicate, are totally different operations. As to object — we can ideally construct an object of knowledge with all the determinations and relations necessary. We can think it in time and space, and under category — as quality, or effect, — but this does not give us EXISTENCE. This, considered in relation to the notion, is a synthetic attribute; and the so-called constitution of the object; all its necessary conditions being fulfilled in thought, gives us no more than a purely IDEAL object. Existence we get and can get only through intuition. The subject is SOME THING — SOME BEING — ere we determine it by predicates. If it is ever to be real, it is already real. No subsequent predication can make it so. The truth is, that BEING is not a proper predicate at all. It is but the subject — perceived or conceived — and is thus, as real or ideal, the prerequisite of all predication. The Schoolmen were right in making BEING transcendent — that is, something not included in the predicaments at all, but the condition of predication itself. This, too, is virtually the view of Kant, as shown in his dealing with the Ontological argument.

To say that I determine knowledge by means of forms of intuition, — as space and time, — and by category, or by both, is thus to reverse the order of knowledge. Besides, it is utterly impossible logically to defend this doctrine without maintaining that category, or the universal in thought, or thought *per se*, is truly knowledge, — a doctrine which in words is denied by the upholders of *a priori* determination, but in reality constantly proceeded upon by them. But the spontaneous and intuitive act of knowledge necessarily precedes the reflective and formulating. Direct apprehension is the ground of self-evidence; testing by reflection proves space, time, and category to be necessary; and, if necessary, universal in our knowledge.

Self-evidencing reality, guarded by the principles of identity and non-contradiction, is thus the ultimate result of the Cartesian method, and the starting-point of speculative philosophy. The basis proved a narrow one; and the deductive system of propositions which he grounded on it did not attain throughout even a logical consistency, far less a real truth. But this does not affect the value of his method, which is twofold — the intuition of the reality of self as given in consciousness, and the limit set to doubt by the principle of non-contradiction.

The most essential and perhaps the most valuable feature in the philosophy of Descartes is thus seen to be the affirmation involved in the *cogito ergo sum* of the spontaneity of the primary act of knowledge. I AM CONSCIOUS is to me the first — the beginning alike of knowledge and being; and I can go no higher, in the way of primary direct act. Whatever I may subsequently know depends on this — the world, other conscious beings, or God himself. This is to me the revelation of being, and the ground of knowledge. This was to found knowledge on its true basis — conscious experience, and conscious experience as in this or that definite form — of feeling, perceiving, imagining, willing. Even though Descartes had gone no further than this, he inaugurated a method, an organon of philosophy, which, if it be abandoned by the speculative thinker, must leave him open to the vagaries of abstraction, to the mythical creation of «pure thought,» — *i. e.*, of reasoning divorced from experience. The least evil of this process is that it is a travesty of reasoning itself — that conclusions are attached to premises, and not drawn from them — and the whole process is an illegitimate personification of abstractions. Descartes properly laid down the principle that knowledge springs out of a definite act of a conscious being, self revealed in the conscious act. He did not stop to analyze the whole elements of this act, or to set forth the conditions of its possibility, or to analyze the conditions of the thing or «object» of which the self-conscious being takes cognizance, or to consider how the conscious act has arisen, — whether out of the indeterminate, or out of determinate conditions. He had neither full analysis nor hypothesis on these points; and as to the last, he was right, for he saw clearly that conscious experience in a given mode must be, ere any of these questions can even be conceived or determined. And had some of those who have since followed out these lines of inquiry, fully appreciated and truly kept in view the Cartesian position of a positive experiential act as the necessary basis of all knowledge by us, they would have kept their analysis of its conditions closer to the facts, and they would have seen also that no starting-point in a so-called «universal,» or in thought above this conscious experience, is at all possible; that knowledge by «determination» is a mere dream and an illegitimate doubling of knowledge or consciousness; that at the utmost, in this respect, knowledge never can rise beyond mere correlation of particular and universal; and that, both in philosophy and in science, knowledge grows and is consolidated, not through «re-thinking» or «reasoning out» of experience, but through a patient study of the conditions of experience itself, in succession and coexistence — a study in which the individuality of human life and effort matches itself in but a feeble, yet not unsuccessful way, against the infinity of time and space. This, too, would have prevented the mistake of supposing that the only critical, analytic, and reflective, in a word, philosophical, thought is that which accepts or finds a formula, within which our experience must be compressed or discarded as unreal, with the risk, actually incurred, of sacrificing what is most vital in that experience.

VI. The Criterion of Truth.

Descartes sought to evolve a criterion of truth from the first indubitable position. This was the clearness and distinctness of knowledge. He has defined this test in the following words: «I call that clear which is present and manifest to the mind giving attention to it, just as we are said clearly to see objects when, being present to the eye looking on, they stimulate it with sufficient force, and it is disposed to regard them; but the distinct is that which is so precise and different from all other objects as to comprehend in itself only what is clear."

This test is evidently derived from reflection on intuitional knowledge. It is involved in his first truth, but it is not the sole guarantee of that truth; for this, as we have seen, is ultimately non-contradiction. His first truth could hardly be taken as affording the strict conditions of all truth, for in this case truth would need to be both direct and necessary. Certain principles might be so, but even in respect of them, it would exclude the idea of derivation and subordination, and lead to the idea of independent reality and guarantee. And the test would exclude all derivative knowledge, even when it was hypothetically necessary. Further, if it were set up as the absolute standard of truth, contingent or probable truth would be altogether excluded from the name. Descartes thus contented himself with the general statement of clearness and distinctness; and his first truth is accepted in its fullness as simply the basis of deduction—as the ground whence he may proceed to build up a philosophy of God and the material non-Ego.

The criterion is, however, ambiguous in its applications. When it is said that whatever we clearly and distinctly conceive is true, we may mean that it is possible—*i. e.*, an ideal possibility; or we may mean that it is real—*i. e.*, a matter of fact or existence. And Descartes has not always carefully distinguished those senses of the word true—as, for example, in his proof of the being of Deity from the notion. If we take the formula in the latter sense, we are led to identify truth with notional reality and its relations—thought with being.

The best criticism of the Cartesian criterion is unquestionably that given by Leibnitz in his famous paper—"*Meditationes de Cognitione, Veritate, et Ideis.*" He indicates with singular felicity the various grades of our conceptual knowledge. Cognition is obscure, when the object is not distinguished from other objects or the objects around it. Here the object is a mere something—not nothing; but what it precisely is, either in its own class of things or as contrasted with other things, we do not apprehend. Cognition, again, is clear, when we are able definitely to comprehend the object as in contradistinction from others. Clear cognition is further divided into Confused and Distinct. It is confused when we are unable to enumerate the marks or characters by which the object is discriminated from other objects, while it yet possesses such marks. Thus we can distinguish colors, odors, tastes, from each other; yet we cannot specify the marks by which we do so. At the same time such marks must exist, seeing the objects are resolvable into their respective causes. Our knowledge, again, is distinct when we can specify the discriminating marks, as the assayers in dealing with gold; and as we can do in the case of number, magnitude, figure. But distinct knowledge may still further be Inadequate or Adequate. It is inadequate when the discriminating marks are not analyzed or resolved into more elementary notions, being sometimes clearly and sometimes confusedly thought — as for example, the weight and color of gold. Knowledge, again, is adequate when the marks in our distinct cognition are themselves distinctly thought — that is, carried back by analysis to an end or termination. Whether any perfect example of this exists is, in the view of Leibnitz, doubtful. Number is the nearest approach to it. Then there is the distinction of the Blind or Symbolical and the Intuitive in cognition — the former being the potentiality of conception which lies in terms; the latter being the clear and distinct or individual picture of each mark so lying undeveloped. When cognition is at once adequate and intuitive, it is Perfect. But Leibnitz here at least hesitates to say whether such can be realized. To distinct cognition there attaches Nominal Definition. This is simply the evolution of the distinct knowledge, the drawing out of the marks which enable us to distinguish an object from other objects. But deeper than this lies Real Definition. This makes it manifest that the thing conceived or alleged to be conceived is possible. This test of the possible is the absence of contradiction in the object thought; the proof of the impossible is its presence. Possibility is either *a priori* or *a posteriori* — the former, when we resolve a notion into other notions of known possibility; the latter, when we have experience of the actual existence of the object; for what actually exists is possible.

Adequate knowledge involves cognition through means of *a priori* possibility. It involves analysis carried through to its end. But Leibnitz hesitates to say that adequate cognition is within our reach. « Whether such a perfect analysis of notions can ever be accomplished by man — whether he can lead back his thoughts to first possibles (*prima possibilia*) and irresolvable notions, or, what comes to the same thing, to the absolute attributes of God themselves, viz, the first causes,— I do not now dare to determine.»

Leibnitz properly applies his distinction of nominal and real definition to the Cartesian proof of the reality of Deity from the notion of the most perfect being. This he says is defective as a proof in the hands of Descartes. It would be correct to say that God necessarily exists, if only he is first of all posited as possible. So long as this is not done, the argument for his existence does not amount to more than a presumption. But Descartes has either relied on a fallacious proof of the possibility of the divine existence, or he has endeavored to evade the necessity of proving it. That this proof can be supplied Leibnitz believes, and with this preliminary requisite fulfilled, he accepts the Cartesian argument.

It is obvious that the proper position of the criterion of Leibnitz as given in the real definition is at the very beginning of a system of knowledge. Possibility, or the absence of contradiction, underlies, in fact, clearness and distinctness. It is essential to the unity of any object of thought. The furthest point in abstraction to which we can go back is SOME BEING or SOME OBJECT, — something as opposed to nothing or non-being. But even this something must be at least definitely thought or distinguished from its contradictory opposite non-being or nothing. If it were not, the knowledge would be impossible. Its reality as a positive notion depends on this. Nay, even the negation, non-being or nothing, depends for any meaning it possesses on the positive being an object of knowledge The correlation here is not between two definite elements; one known as positive, the other as negative; there is correlation, but there is no correality. The negative side is satisfied by mere negation, as in the parallel case of ONE and NONE. And no reconciling medium is conceivable — none is possible to thought.

If so, let it be named. To galvanize the negative into a positive in such a case, and call it synthetic thought, is simply to baptize the absurd. This solid advance on Descartes is virtually due to the acute and accurate mind of Leibnitz. It is our main safeguard against fantastic speculation.

The most liberal, and probably the fairest interpretation of the criterion of Descartes is, that it is the assertion of the need of evidence, whatever be its kind, as the ground of the acceptance of a statement or proposition. As such, it is the expression of the spirit of the philosophy of Descartes, and of the spirit also of modern research. As evidence must make its appeal to the individual mind, it may be supposed that this principle leads to individualism in opinion. This is certainly a possible result, but it is not essential to the principle. Evidence may be, nay, is at once individual and universal. The individual consciousness may realize for itself what is common to all; and indeed has not reached ultimate evidence until it has done so. And, however important may be the place of history, language, and social institutions in the way of a true and complete knowledge of mind or man, even these must appeal in the last resort to the conscious laws and processes of evidence, as embodied in the individual mind.

From his virtually making truth lie in a definite and high degree of conscious activity, Descartes was naturally led to regard error as more or less a negation, or rather privation. This idea he connects with Deity. Error is a mere negation, in respect of the Divine action; it is a privation in respect of my own action, inasmuch as I deprive myself by it of something which I ought to have and might have.

He thus develops his doctrine of Error.

1. When I doubt, I am conscious of myself as an incomplete and dependent being; along with this consciousness, or, as we would now say, correlatively with it, I have the idea of a complete and independent Being — that is, God. This idea being in my consciousness, and I existing, the object of it — God — exists.

2. The faculty of judging, which I possess as the gift of a perfect being, cannot lead me into error, if I use it aright. Yet it is true that I frequently err, or am

deceived. How is this consistent with my faculty of judging being the gift of a perfect God?

3. «I have in my consciousness not only a real and positive idea of God, but a certain negative idea of nothing—in other words, of that which is at an infinite distance from every sort of perfection; and a conception that I am, as it were, a mean between God and nothing, or placed in such a way between absolute existence and non-existence, that there is in truth nothing in me to lead me into error, in so far as an absolute being is my creator. On the other hand, as I thus likewise participate in some degree of nothing or of non-being—in other words, as I am not myself the Supreme Being, and as I am wanting in every perfection, it is not surprising I should fall into error. And I hence discern that error, so far as error, is not something real, which depends for its existence on God, but is simply defect. . . . Yet «error is not a pure negation [in other words, it is not the simple deficiency or want of some knowledge which is not due] but the privation and want of what it would seem I ought to possess. . . . Assuredly God could have created me such that I should never be deceived. . . . Is it better then, that I should be capable of being deceived than that I should not?»

4. The answer to this is twofold. First, I, as finite, am incapable of comprehending always the reasons of the Divine action; and, secondly, what appears to be imperfection in a creature regarded as alone in the world, may not really be so, if the creature be considered as occupying «a place in the relation of a part to the great whole of His creatures.» What precisely that relation is, Descartes does not undertake to specify. This solution of the difficulty is, therefore, only problematical.

5. As a matter of observation, error depends on the concurrence of two causes, to wit—Knowledge and Will. By the Understanding alone, I neither affirm nor deny; but merely apprehend or conceive ideas. It is Judgment which affirms or denies. And here we must distinguish between non-possession and privation. There may be, and are, innumerable objects in the universe of which I possess no ideas. But this is simple non-possession; it arises from my finitude. It is not privation, for it cannot be shown to be the keeping or taking away

from me of what I ought to have. The form or essence of error lies not in non-possession, but in privation. So far as Deity is concerned, this non-possession on my part of certain ideas is properly negation, not privation; for it is not properly a thing or existence. It is merely that Deity, in determining my knowledge, has allowed that knowledge a definite sphere of possibility, and restricted it from objects beyond. But as I never had, or can be shown to have had, any *a priori* right to more than I have actually got, there never was in respect of me any privation.

6. Again, there are objects which are not clearly and distinctly apprehended by the Understanding. This may be a mere temporary state of mind, which is capable of being removed by clear and distinct knowledge. These two facts, then, that in some quarters there is no knowledge, and that knowledge is in some cases not clear or distinct, render error possible. For the power of will, which is wider than the understanding — in fact, absolutely unlimited, unlike the other faculties — may force on a judgment either in the absence of knowledge, or with imperfect knowledge. Hence error; and hence also, in the case of good and evil, sin; for error and sin are both ultimately products of free will. Descartes holds very strongly and definitely in regard to will that it is a faculty « which I experience to be so great, that I am unable to conceive the idea of another that shall be more ample and extended; so that it is chiefly my will which leads me to discern that I bear a certain image and similitude of Deity.» The will consists only of a single and indivisible element; hence nothing can be taken from it without destroying it. Its power lies in this, that we are able to do or not to do the same thing; or rather, that in affirming or denying, pursuing or shunning, what is proposed to us by the understanding, we so act that we are not conscious of being determined to a particular action by any external force. Its essence is not, however, in indifference in respect to the same thing; this is the lowest grade of liberty. On the contrary, the greater degree of knowledge the mind possesses as to one of the alternatives, and the consequently greater inclination of the will to adopt that alternative, the more freedom there is; freedom consist-

ing ultimately in a consciousness of not being determined to a particular action by any external force. It is, in a word, great clearness of the understanding, followed by strong inclination in the will. As, however, we do not always wait for this condition, but determine affirmatively or negatively, or pursue and shun, without it, we fall into error or sin.

Error is thus no direct consequence of finitude; only the possibility of it is so. It is properly to be regarded as the result of privation, and this is my own wilful act. It should, however, be observed here, that Descartes's positions regarding the will do not appear to be consistent. The two definitions of liberty which he gives are exclusive of each other. We cannot be conceived absolutely free in respect of two given alternatives, and yet free when the inclination of the will follows the greater clearness of the Understanding. The former is the liberty of indifference; the latter is simply that of spontaneity,— the spontaneity being relative to a previous or conditioning state of the consciousness.

It is further clear from the statements now quoted, that Descartes did not regard the Ego of consciousness as either a negation, non-entity, or illusion, as is represented, but a very definite and real positive — a mean, as he puts it, between absolute existence on the one side, and non-existence on the other. He certainly did not hold that the finite consciousness, so far as finite is either an error or an illusion. On the contrary, it is with him the basis of the very possibility of knowledge, and the type and warrant of a higher consciousness. And what other ground is possible? If the finite by itself be regarded as an illusion, and the infinite by itself be regarded as the same, it is curious to find that the two together make up reality. In this case, the relation between infinite and finite may be assumed as the true reality. So long as we hold the relation in consciousness, infinite and finite are known, and therefore real. But ere we can make this out, we must vindicate the possibility of a conscious relation between two terms, in themselves incognizable, non-existent, or illusory. Being must thus mean a groundless relation suspended *in vacuo.*

Nor is there anything special to his doctrine of Error which logically compels him to hold those conclusions.

Principles of inference entirely foreign to his system and habit of thought may be assumed, and conclusions of this sort thus forced on his premises. It may, for example, be said, with Spinoza, that "determination is negation," and that the finite, as finite, is a mere negation or non-entity; because it is a negation of the absolute substance, or of an Infinite Ego, or Infinite Self-consciousness — whatever ambiguity such phrases may be supposed to cover. But this may be said of any doctrine whatever which recognizes the Ego of consciousness as simply a fact or reality. And the principle of every determination being a negation is neither unambiguous nor self-evident; in several senses, it is rather self-condemned. It stands in need, at least, of thorough and precise vindication ere it is of use in any process of inference. In this application, at any rate, it will be hard to show its consistency. We must have the proof, in the first instance, of the Absolute Substance or Infinite Ego which the being of the finite Ego negates. Is it said that the Infinite Ego is the necessary correlate of the finite Ego? What, then? Does this correlation imply that the correlate or Infinite Ego is real in the sense in which the Ego of consciousness is real? Or rather even, as it seems to be inferred, does it necessarily imply that the Ego of consciousness discovers itself not to be what it at first is conscious that it is, and is really only a mode of this truly existing Infinite Ego? These are points in the logic of the process which ought not to be passed over without notice or vindication. And even if we get somehow the length or the height of the so-called Infinite, we must then ask whether the Infinite Ego means merely the abstract notion of an Ego, or whether it means a self-conscious Ego that actually pervades all being. If the former, the so-called determination is but an instance of the contemporary realization of the individual fact and the general notion. If the latter, it is impossible that there can be a finite Ego at all. It is not possible even in correlation. But, secondly, the result is not either possible or consistent. If the definite Ego of consciousness loses hold of its determination or limitation, it loses hold of itself — it no longer is; if it retains its limit or determination, it is not the Infinite Ego; if it commits the absurdity of losing hold of it and yet retaining it, it loses hold of itself, but does not become the Infinite Ego; in plain words, the « I » of our consciousness cannot be both man and God. That the finite consciousness is the infinite or divine consciousness is asserted on such a principle; it is as far from proof as ever it was.

VII. The Ego and the Material World.

On this point the doctrine of Descartes may be summarily stated.

We have, in the first place an assured world of consciousness with the Ego as its centre,—the centre of thoughts and ideas. But Descartes recognizes, as he must, the knowledge of extension or an extended object,—of a thing filling space. This knowledge is in the consciousness. How is it got? From the senses somehow. But what precisely is the knowledge the senses give us of the material non-Ego? Have we as direct a knowledge of it as we have of consciousness and its modes? In the view of Decartes certainly not. The extended does not guarantee its own existence, as the consciousness does. We are not at once involved in self-contradiction, in denying its reality, as we are in the case of our consciousness. The extended is known through idea or representation; and it is the problem of Cartesianism to vindicate the reality on the ground of the idea, to show that outside of consciousness, as it were, there is an object corresponding to idea in the circle of consciousness itself.

Herein lies the so-called dualism of Descartes; but, in point of fact, it is but one form of his dualism, for there is with him the contrast between the finite Ego and God, and this is as much a dualism as the contrast between consciousness and extension. But the position of Descartes in relation to mind and matter is that, on the one hand, there is consciousness; on the other, there is extension, implying or rendering possible figure and motion. Accepting these as the only possible qualities of matter, Descartes sought to show how all the phenomena of the material universe might be produced, and according to the notional method of his philosophy at once inferred that they actually were so produced. This of course resulted in a mere ignoring alike of facts and laws, especially of the great Newtonian principle of gravitation, which could have no place in such a physical philosophy as that of Descartes.

But consciousness being set on one side, and extension or body on the other, the question arose in the mind of Descartes as to whether, or rather how, there could possibly be between these the relation of knowledge. If he had simply asked whether there was such a relation, the problem was not of difficult solution; but when he asked how such a relation was possible, he raised a totally different and probably illegitimate question. But be this as it may, Descartes held that there could be no immediate consciousness of extension or an extended object on the part of the mind. The process of Perception, according to Descartes, may be stated as follows: There is the occurrence of organic impressions on organ, nerve, and brain. The last of these reaches the central point of the nervous organization, — by him regarded as the pineal gland, — these organic movements are not in consciousness at all; even the last of them is not apprehended or known in the process of our sensitive consciousness. Yet the apprehension of the extra-organic object is impossible without these as conditions of our knowledge. On occasion of the last of the organic movements an idea of the extra-organic object is generated in the consciousness. This is the single object of consciousness. It is representative of the outward object, — of the external or extra-organic object. Through and on the ground of this representative idea we know and believe in a world of outward objects. Descartes uses idea both for those organic movements, — the traces on the brain, and for the conscious representation; but nothing can be clearer than that he held the former to lie wholly beyond consciousness during the time of their occurrence, and to be merely the occasions on which the mental idea rose into consciousness. Here he virtually supposes supernatural action to excite the idea; and he makes an appeal to the veracity of Deity to guarantee the inference of outward reality from it.

Descartes's treatment of this point cannot be said to be satisfactory. Indeed no satisfactory dealing with the problem is possible, as its terms were put by Descartes. His position in substance is, that as God is veracious, we may trust that the idea really and adequately represents the material non-Ego. But of course there is the prior question as to how the idea came into the conciousness, and then as to the right we have to suppose it representative. The veracity of Deity, even if adequately and logically vindicated for the system, would guarantee nothing to us beyond what our consciousness or idea might actually testify. And if the idea be not properly got, be not a real idea, and if the conditions under which it is supposed to be got render its representative character logically impossible, the veracity of Deity could not help us to give an untrue reality or character to the idea. We should then be merely calling in the veracity of Deity to enable us to assert as real and true what was simply a matter of our own fancy and fiction; to give to a thing, a reality and character which it had not, and not merely to obviate objections or satisfy doubt regarding the reality and the character which it proclaimed itself to have. God's veracity can never be pledged for anything more than the facts of consciousness are, or the deliverance of consciousness declares. And to ascertain this in the first place is the task of philosophical method and reflective analysis.

With respect to the first question, as to how we know the extended reality in which we believe, whether by intuition or indirectly, there are passages in Descartes which point to the acknowledgment of direct or intuitive knowledge. But he gives this up, and, through force of old presumption, restricts perception to ideas or states of consciousness.

Obviously, if intuition cannot be made out in some form or other, a material non-Ego, must be given up; and certainly the hypothesis of the representative idea, as is now well acknowledged, will not help us. To think out the notion of a material non-Ego, from the requisites of mere self-consciousness, is impossible. Nothing can be weaker than Kant's vacillating attempts at the proof of a world in space and time from self-consciousness. This could be done only as the requisite of the difference of the self from the not-self; but this is satisfied by the mere modes of consciousness themselves varying in time. Self, apart from these, is unknowable and unthinkable, but not apart from a material non-Ego. Again, a representative idea is impossible apart from repeated intuitive acts. The points and details must be successively apprehended ere they can be cognized in representation. And we must apprehend these as the condition of our recognition of the correct representation.

But Descartes seems to have had difficulties, as is usual, as to the possibility of direct knowledge by consciousness of extension. These were part of the general alleged difficulties as to how two things so different in nature as consciousness and extension could have communion or intercourse — how mind could know matter, or influence it in anything — how matter could act upon or affect mind. As to the general fact of the intuition of extension, or any material quality, he did not see that in so dealing with the question he was illogically putting the question of possibility before the question of fact. This order could only be fairly followed on a system which professed to demonstrate *a priori*, or by pure thought, the possibility of knowledge, and through this possibility to determine the facts, or at least to make the conception of the facts square with the ideal possibility. This need not at present be discussed; for although Descartes was in a sense demonstrative, this was not the kind of demonstration he contemplated; and it is one which, as might be anticipated, is exceedingly likely to mutilate the integrity alike of truth and philosophy. But Descartes had no idea of demonstrating either the possibility of knowledge or the contents of knowledge. His demonstration was so far a legitimate one. He sought or assumed facts of experience or consciousness, and endeavored to show their logical connections and relations. The method when carried out in its integrity, is primarily one of observation and reflective analysis. And in order to the faithful application of it, we must scrutinize carefully and fully every form of our conscious life, and every, even apparent, deliverance of our intelligence. This at least is the first thing to be done, whatever theory we may afterward form of the origin or genesis of those forms of our conscious life, or even, if that be possible, of our consciousness itself. Of all things the most unwarrantable, is to adopt, whether on so-called grounds of reason or on tradition, which comes to very much the same thing, certain general assumptions regarding what is possible or impossible in knowledge, and by means of these assumptions to override, mutilate, or reject the positive deliverances of our intelligence—especially on the side of intuition. But this is precisely what Descartes seems to have done; it is what has been done repeatedly since his time; it is done now; and until philosophical method is freed from this unfaithfulness, philosophy can make no real progress, and will continue to fall short of the breadth of experience and reality.

So far as the knowledge of a material non-Ego is concerned, the question is simply one of analysis of our consciousness. We cannot beforehand say, it is impossible I can know aught of extension or resistance, or any other form of reality, because I can know only my own states of consciousness, or because I cannot know anything distinct from myself. This is to suppose that you have a philosophy ere you set about seeking it. Where has this superior philosophy been got, and what is its guarantee? Only in that consciousness the fullness of whose deliverances it is adduced to discredit. For a consciousness to me above my consciousness is an absurdity and contradiction in terms.

If we look for a moment at some of the supposed difficulties alleged against the intuition of a material non-Ego, we shall see both how assumptive and how trifling they are.

It seems that the mind or consciousness, in order to apprehend extension, or in apprehending extension, must become extended—that is, must cease to be mind. Or the mind being indivisible, if it apprehends extension, must become divisible—and so on. Why MUST this be? Simply from an abuse of words and a false analogy. Extension apprehended is said to be WITHIN consciousness; consciousness is therefore necessarily extended; it has parts beyond parts like extension. A sufficient answer to this would be—when I am conscious of extension, as a series of coexisting points, I do not cease to be conscious of mind—I do not become extended or divisible—nay, I should not know what extension or divisibility meant at all, if I had not in myself the co-apprehension of the non-extended and indivisible. I know or apprehend only through contrast and correlation; and if all in knowledge be one, say the extended, I do not know the extended at all. It is really nothing for me or my knowledge. Consciousness as I experience it, and as I can conceive it, is an antithesis — a varying contrast — through an identity, of acts or states and me, of objects of these acts and me, of the successive and the one, of the divisible and the indivisible, the extended and the non-extended: and because I am or am supposed to be percipient of an object made up of parts beyond parts, I no more become such, or cease to be the one indivisible knower, than I cease to be one because I am conscious in succession of various thoughts or feelings. The expression, WITHIN consciousness, indicates simply a false analogy based on the previous assumption that consciousness is an extended thing, which, like the object perceived, is capable of a WITHIN and a WITHOUT — that is, it is a mere begging of the point at issue.

The truth is, that so far as this point is concerned, so far from knowledge implying an identity between the subject knowing and the object known, it rather postulates a difference; for we always and must always distinguish subject and object in the act. But it should be kept in mind that in order to constitute this difference we do not require an object such as extension or resistance; we require only a mode of consciousness whatever that may be, feeling or desire. This enables us to discriminate self and mode, or self and object, as well as extension or resistance. The extended, and to us insentient, is the true test, not of self and its modes, but of self and its modes on the one hand, and the material non-Ego on the other. Self might be realized in the fullness of its being through the moments of time; its conception of reality is amplified by the apprehension of the points of space; but this does not make it to be or to know more truly what it is. The living spirit knows itself to be in the very movements which reveal its life. If this be so, the material non-Ego is not the necessary diverse correlate of the Ego; the Ego is not subverted by its subversion, but the field is left open, apart from all *a priori* assumption as to its powers of apprehension and compass; and a basis is laid for the requirements of a faithful and sound psychology. The whole, too, of the speculation subsequent to Descartes regarding Occasional

Causes, Vision in Deity, and Pre-established Harmony, originating in the groundless difficulty which he felt about the knowledge of the material non-Ego, is superseded as being devised merely to overcome an imaginary difficulty.

But the whole of the current doctrine of subjectivity is based on an assumption or an imperfect analysis of the matter of fact. The phrases, «state of consciousness,» and «our knowledge being confined to states of consciousness,» are about as ambiguous as can well be imagined. They confound the knowledge by the conscious self of its modes with the knowledge by the conscious self of qualities of a wholly different order. The first is a self-guaranteeing knowledge, as we have seen; the other is a knowledge, but it is not self-guaranteeing, at least on the principle of non-contradiction. I am conscious of purely subjective states; I am further conscious of a sentient extended organism, which I call my body, and at the same time I am conscious of an extension, which is no part of my sentient organism, corresponding to the surface of contact. This is as clear and distinct a deliverance of consciousness as can be found in experience. Even supposing it to be shown that we have no consciousness of external qualities until the sensorium is reached by the ordinary organic impressions, this by no means proves that the perceptive faculty, as conscious, does not reach the utmost bound of the bodily organism, the moment the stimulus is completed. None of these preceding organic impressions is an object of consciousness at all; and what we may perceive, though following upon these, is by no means limited by them. The scope of consciousness must, in a word, be tested by what consciousness actually declares. The sentiency we experience and feel is all through the bodily organism; for, as Mr. Lewes has shown, the brain is not exclusively the organ of sensation. But there is a limit to this sentiency—beyond which it cannot go, and which it does not transcend. This is found at the point of contact between the bodily surface and what we are thus entitled to call the external object. As this quality or object is not felt or known by us to be sentient or part of our sentiency as our bodily organism is, we regard it as a non-Ego, or as not identical with any mode of our consciousness. This is for us the material or truly external non-Ego. The outward material world is for us the insentient, extended, and resisting. Our test of this as an independent existence, as something more than a mere state of sentiency or consciousness is, that it is not necessary to the existence or to the fact of our consciousness. I am conscious does not imply an outward material non-Ego; it implies merely a distinction in the consciousness itself between the Ego and the mode, and between the Ego and the successive modes. Withdraw either of those, and my consciousness perishes. But it is not so with the qualities of extension and resistance correlative to my living and moving organism. Consciousness is not subverted by taking those away; and the conclusion, therefore, is irresistible that I am, whether they subsist or not—that they are not identical with my being—that, in a word, there is a mutual independence and correality between me, the conscious subject, and those qualities or objects of consciousness, at least during the act of perception. This, as appears to me, is the last point in the analysis of perception which we can reach. It is for us an ultimate and irreconcilable antithesis of being. It is given us, too, by that consciousness which, in its ultimate and fully analyzed primary data, is the supreme source of knowledge for us. That there is some transcendent ultimate unity, from which both the Ego and the non-Ego flow, is a plausible hypothesis: but it is only a hypothesis—one more or less probable, but incapable by us of absolute proof. Any process of the development of the Ego and non-Ego from an absolute, yet given by speculative philosophy, turns out, on examination, to be a mere piece of verbalism—a formula of abstraction which leaves out the differences, and thus eviscerates the problem to be solved, or which, confounding affirmation and negation, abolishes knowledge. And as for a scientific solution of the problem, we may say this at least with safety, that none has as yet been given.

Even the lower position of a mechanical equivalent of each state of consciousness is not likely to fare better, if we may judge from a recent attempt at a statement of the question made by a physicist of note.* It is, first

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*Professor Huxley, *Lay Sermons.*—'Descartes,' p. 339.

of all, broadly laid down that all we can know of the universe is a state of consciousness. Applying this particularly to what we speak of as the material universe, the phenomena of nature are simply states of consciousness. At the same time, it is maintained that there is, and will ultimately be found, "a mechanical equivalent" of each state of consciousness. There is "a correlation of all the phenomena of the universe with matter and motion." This language obviously points to a dualism. What precisely is "the mechanical equivalent of consciousness" here referred to? It is something in correlation with the state of consciousness; it is its mechanical equivalent, as there is a mechanical equivalent of heat. But in the same breath we are told that our knowledge is entirely restricted to states of consciousness. Is this mechanical equivalent known to us? In that case, it can be but a state of consciousness. Indeed we are expressly told that "matter" and "force," so far as known to us, and, in other words, so far as they are anything to us, are simply states of consciousness. Then what sort of mechanical equivalent or correlation have we here? Not two things at all—not the mechanical force and the state of consciousness, but simply two states of consciousness, the one which we call, viz, feeling,—the other which we name its mechanical equivalent—perhaps a pound weight falling through a foot. We have not, therefore, explained the state of consciousness, or resolved it into anything different from itself. We have simply said that one state of consciousness, which we call a mechanical equivalent, is followed by another, which we call feeling or volition. This is not to explain the state of consciousness by anything in mere correlation with it; it is merely to say that there is a certain or regulated succession in the states of consciousness themselves. But each state is as far from being resolved into a correlative mechanical equivalent as ever it was; nay, more, we have given up the whole hypothesis of dualism, while we retain its language, and think we have effected a reconciliation of materialism and spiritualism. In saying that all we know or can know is a state of consciousness, we preclude ourselves from asserting, anything that is not a state of consciousness—and any mere hypothetical matter or force or motion which we postulate as in correlation, is illegitimately assumed as a fact — nay, illegitimately even conceived as an idea.

VIII. Innate Ideas.

The predicate «innate» has been a source of great debate in connection with the philosophy of Descartes. But any one who intelligently apprehends its first principles, will readily see both what it means and what is the extent of its application in his philosophy. It will be found to amount to this, that there is no mental modification whatever in our consciousness, which, according to Descartes, is not innate. But it is innate not in the sense of being actually developed, or an actual modification of consciousness; innate only in the sense of being a potentiality capable of development into a form of consciousness, yet waiting certain conditions ere this takes place. In this sense, every idea of perception, and every state of sensation is innate. The supposed outward world and the organic impressions which precede perception and sensation lie wholly beyond consciousness. Yet, but for their action in the view of Descartes, neither perception nor sensation would occur. At the same time, their influence ceases at the threshold of consciousness; and when their action is completed, there originate in the mind out of its own nature the conscious idea of extension, and the conscious sensation of color or sound. These ideas and sensations are wholly innate, in the sense that they are evolutions of the consciousness alone; that they are not transmitted to the mind by the action of outward objects or by the organic impressions. They are the forms of a new and independent power, which arise simply on occasion of external stimuli, but which these stimuli serve in no way to create. Perceptions are innate,— due to the independency of the mind, on the theory of Descartes, hardly less than they are innate on the doctrine of the spontaneous monadic development of Leibnitz.

But there is another class of mental modifications with Descartes. These are not perceptions or sensations. They are «truths,» or «common notions,» or universal principles,—such as the law of substance and quality and of non-contradiction. These too are innate,—especially innate. They are innate potentialities, over and above mere perceptions or sensations. They too become actual in experience—but, unlike sensation, they are not immediately preceded by organic impressions. The moment the doctrine of Descartes is thus correctly apprehended, the whole polemic of Locke against «Innate Ideas» is seen to be irrelevant. If the doctrine is to be validly assailed, it must be on wholly other grounds than those stated by Locke.*

IX. MALEBRANCHE (1638–1715).†

IN ACCORDANCE with the usual Hegelian formula as applied to history, an attempt is made to show that the system of Descartes is part of the evolution of what is called «thought.» It is assumed, accordingly, that there is but a single conception at the root of the philosophy of Descartes,—that this runs all through his thinking,—and that it is carried to its necessary development by the force of «the immanent dialectic,» through Malebranche and Spinoza. One of the worst features of the Hegelian mode of looking at the history of speculation comes out here. Assuming that speculative thought develops necessarily through a series of specified moments, it must either find the single moment in a given system or reject the system as unspeculative. The result of this method is, on the one hand, an attempt to make a system express one of the moments; or, on the other, arrogantly to pass by the system as of no account. We have thus frequently instead of «pure thought» pure phantasy in dealing with a system of philosophy, and a willful blindness to the facts of history and experience. In the case of Descartes the Hegelian mistake is twofold. It is wrongly assumed that the philosophy of Descartes represents a single thought, or a single moment of thought, and it either incorrectly or inadequately describes the main thought which animates his philosophy.

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* All that is stated here will be found proved and illustrated in the Appendix to the present volume, Notes I., II., and VI. These are now reproduced exactly as they appeared in the Appendix to the Translation of *The Meditations*, published in 1853. The information therein contained, and the relative passages, have since been generally utilized by writers on Descartes and Cartesianism; and not unfrequently the quotations are credited to those who thus make use of them as introduced for the first time into our Cartesian literature.

† His writings appeared from 1674 to 1715. Spinoza lived from 1632–1677. His writings appeared from 1663 to 1677. Malebranche, as in some respects nearer in doctrine to Descartes, is first considered.

With Descartes, according to Hegel, we have to renounce every prejudgment in order to gain a pure beginning. The spirit of the philosophy of Descartes is consciousness as the unity of thought and being. The «I» in the philosophy of Descartes has the meaning of thought, not the individuality (*Einzelnheit*) of self-consciousness. Descartes appeals to consciousness for his first principle; but he only *naïvely* gets at the consequences of it, or at least at the propositions of philosophy. He does not at first properly state the principle out of which the whole content (*Inhalt*) of philosophy is to be derived. The identity of being and thought,—altogether the most interesting idea of modern times,—Descartes has not farther proved, but for it has singly and alone appealed to consciousness, and provisionally placed it in the front. For with Descartes the necessity is not in any way present to develop difference out of the «I think.» Fichte first proceeded to this, and out of this point of absolute certainty to derive all determinations. Then of course we must expect to find that Descartes takes being in its wholly positive sense, and has no conception that it is the negative of self-consciousness. Then there is constant talk of the pure consciousness contained in the concrete «I.» And Descartes is criticised in respect that the certainty of self-consciousness does not properly pass over to truth, or the determined. This passing over is done «externally» and reflectively only. Consciousness does not determine itself.

In plain language, the whole basis and method of Descartes are criticised from an assumption that human knowledge is possible from a mere universal or abstract something called pure thought, or the pure consciousness of the «I,»—above altogether, in the first place at least, ordinary consciousness or knowledge. This system is not only unvindicable in itself and its principles, but it has really no connection, logical or historical, with the true system of Descartes. Nothing, for example, can be more out of place historically than to connect Descartes with Fichte, or to suppose that the system of the latter is any way a fair logical evolution from that of the former. It is even ludicrous to set up this so-called Hegelian development of "reason," and by virtue of the gathered power of a word, whose connotation is altogether different from the Hegelian, to ask us to renounce the experiential method of Descartes and nearly the whole of subsequent modern philosophy. It is a complete mistake historically to assume that the moment of Cartesianism is consciousness,—spoken of in the vague generality with which Hegel deals with it. The consciousness of Descartes is a self-guaranteeing principle,—which is a great deal more than Hegel has vindicated or can vindicate for his Pure Being. In truth, the first principle of Descartes is not consciousness properly speaking, but self-consciousness,—tested experimentally and found self-guaranteeing. Self-consciousness was never more truly or fully appreciated than in the system of Descartes. It is, if anything is, his most vitalizing thought. And if the system of Descartes be one thoroughly of self-consciousness, neither that of Kant nor that of Fichte can be so described. The basis of Fichte's system is an absolute Ego, of which the Ego of consciousness is at best phenomenal; and the real Ego of Kant is wholly noumenal, not in phenomenal consciousness at all, while his phenomenal Ego has but a generic or logical identity.

Nor do later attempts to find the one thought of Descartes fare better. To say absolutely that Descartes stated a thought which was legitimately developed by Malebranche and Spinoza is thoroughly misleading. There are points in Descartes which were fairly enough developed by these later thinkers; there are others which were not. There are important points in the philosophy of Descartes which were not touched by either. Descartes thought was manifold; and so must be its developments.

The aim of Descartes was, no doubt, to find absolutely ultimate truth and certainty, as guaranteed by the reflective analysis of consciousness—to obtain therein a criterion of truth and falsehood—and, if possible, to develop by demonstration from the single ultimate fact, the truth about the world and God,—and thus to subordinate and correlate the truths of philosophy. But the peculiarity of Descartes was not, as we have seen, so much this aim — which is the common one of speculative systems — as his method of seeking it, in an examination of consciousness, and finding it in the principle of limit to conscious thought. It is this point of limit which, in a speculative view, is the peculiarity of Cartesianism; and it is this exactly which, in the so-called evolution of his thought, Malebranche partially and unconsciously, and Spinoza wholly and consciously, sought to reverse. If the reversal of a position, and, I should add, the illegitimate reversal, is a development, we have the highest reach of Cartesianism in Spinoza. Spinoza developed Descartes by amending the formula *cogito ergo sum*, into *cogito ergo non sum.*

The truth is, that both Malebranche and Spinoza seized on those subordinate points in the philosophy of Descartes which tended to lower human activity and personality, and in different ways sought to ascribe all real efficacy or casuality to a Power above and outside of man. Malebranche certainly kept up the conception of a Personal Deity as the Supreme Cause, though inconsistently with his conception of Deity as mere indeterminate or unrestricted being. Spinoza held by an Indeterminate Substance. It is doubtful, however, whether Malebranche, in virtually annihilating human personality in experience, had any right thereafter to speak of a Divine Personality; and certainly Spinoza precluded himself even from the conception of a Finite Personality by placing at the source of the universe of Being mere Indeterminate Substance. There would be an inconsistency on the doctrine of either in making this Divine or Substantial Power all, and at the same time holding Man to be something — either a spontaneous agent, a responsible power, or even a being in any way resembling the living reality of human consciousness.

On one cardinal point of Descartes — the knowledge of mind in consciousness, and the corollary that the soul is better and more clearly known than the body — Malebranche entirely differs from him. Malebranche maintains that we have no idea of the mind, and therefore no clear knowledge of it. We know it only through internal sentiment—that is, consciousness; but we have no proper idea of it. Our knowledge of body or extension, on the other hand, is by means of idea; and hence it is a clearer knowledge than that of the soul. As if, forsooth, in the consciousness of extension, the extension or object were clearer than the conscious act of apprehension. We know, however, by this inner feeling or consciousness, that the soul is; but we do not know what it is. His practical test of the superior clearness of our knowledge of extension is, that extension being in idea, we can evolve or deduce from the idea of it alone all its numerous properties and relations: whereas from the so-called idea of the soul we can deduce none of its properties—either pleasure, pain, or any other. Malebranche thus, instead of advancing on Descartes in a legitimate and necessary manner, simply deviated wholly from the spirit and procedure of the METHOD. He regarded a method of deduction and demonstration as the only truly philosophical. He was wholly misled by the analogy of mathematics, as Descartes himself partly was, and sought to deal with the range of knowledge, as a geometer may deal with the properties of space which he borrows and defines. But there is no true analogy. Given space, we can evolve its properties, for we need not proceed beyond itself, save by way of limit, and limit of space is itself space. Given an abstract Ego, it must always remain such. Given a conscious Ego, it is me-conscious, and conscious in one definite way. And let this be knowledge of an object, we cannot proceed merely from this to evolve either desire or volition, or any property specifically distinct from knowledge. We must wait the development of consciousness itself, for our knowledge, even conception, of those new modes. We can no more do this than the physical philosopher can, from the sight of a definite kind and quantity of motion, predict its passage into light or heat, before he has any experience of such a transition. The light or heat are sensations of a specifically different kind from the modes of motion regarded as objects of vision. And these, therefore, it is impossible *a priori* to predict—impossible even *a priori* to conceive. Malebranche shows himself distinctly aware of this in relation to mind. "The soul knows not that it is capable of this or that sensation by any view it takes of itself, but by experience; on the other hand, it knows that extension is capable of an infinite number of figures by the idea representative of extension. . . . We cannot give a definition which shall explain the modifications of the soul. . . . It is evident that if a man had never seen color nor felt heat, he could not be made to understand those sensations by any definition.» But while thus speaking, Malebranche discredited entirely the philosophical method,—the spirit of reflection and the analysis of consciousness on which Descartes relied for the foundations of his philosophy, and which were destined to bring men face to face with the real facts of mental life. Malebranche, in so doing, left himself no basis for his own deduction, and no guaranteed law or method of deduction.

The alleged advance on Descartes, or carrying out of Cartesian principles by Malebranche, is simple, and in many respects irrelevant enough. Descartes' dualism of thought and extension was his preliminary difficulty and puzzle. How can these disparate substances be connected in knowledge? Instead of recognizing the artificial nature of the difficulty, he admitted it as real, and sought to solve it. The soul can but perceive that which is immediately united with it. Things that are corporeal cannot be immediately perceived. Everybody, it seems, admits this. And what is the solution? Sense and imagination give us one set of modes of consciousness or thoughts about this extended world. These are SENTIMENTS—in a word, sensations—such as light, color, heat, pleasure, and pain. These are not in body; they tell us nothing of its nature; they are relative simply to our bodily organization. They have a reality only in us, yet we do not produce them. They are caused in us by God himself; he is the only and the efficient cause of our sensations. Because, according to the view of Malebranche, God is the only real and efficient cause in the universe.

De la Forge, Cordemoy, and Geulincx, had more or less anticipated the doctrine of Occasional Causes. They all felt, as Malebranche himself did, that invariable sequence or correspondence is no true causality. It is a proof simply that causality is in operation; but it is not the causality itself. They had applied this doctrine to the connection between mind and body. It was reserved for Malebranche to apply it universally to the relations of all created things or phenomena of the universe. No finite being, according to Malebranche, be it mind or body or extra-organic object, can act on any other with a true efficiency. There is harmony or correspondence in their manifestations, but that is all. God alone is the efficient cause at work in the world. Things are occasions; their manifestations are subject to definite laws or decrees; the Divine Power is the only sufficient agency in the world,—whether it relate to the production of perceptions, or the realization of volitions. Mind is purely passive, whether there be organic change in the body, or whether even there be resolution. The nervous action, on which the realization of volition depends, is wholly unknown to us. We have thus no power over it; no more power than we have over the organic impressions which are the occasion of sensation. God is all in all,—operating efficiently in and through all. A bad psychology, or rather an unwarrantable deduction, had thus destroyed the activity of knowledge and the reality of freedom and the force of personality.

But we have more than sensations; we have ideas. These are in the sphere of the Pure Understanding. They are the immediate objects of the act of perception; and they are distinct from bodies. Extension, figure, motion—these are not sensations; they are ideas. « In perceiving anything of a sensible nature, two things occur in our perception—Sensation and Pure Idea. The sensation is a modification of our soul, and God causes it in us. . . . The idea, which is joined to the sensation, is in God; and we see it, because it pleases him to reveal it to us. God connects the sensation with the idea, when the objects are present.» But whence come ideas? Malebranche exhausts the possibilities of their origin by a comprehensive statement. The possible explanations are as follow: (1.) Ideas come from bodies. (2.) The soul has the power of producing them. (3.) God produces them in the soul at its creation. (4.) God produces them whenever we think an object. (5.) The soul has or sees in itself all the perfections of bodies. (6.) The soul is united to an all-perfect being who embraces the ideas or perfections of created things. He concludes by adopting the last solution that the soul is united to a supremely Perfect Being, who contains the ideas of all created beings. It therefore sees all ideas in God. The finite is in the bosom of the infinite. He is the place of spirits, as space is the place of bodies; and we are immediately conscious of the ideas of the qualities of body in God himself.

Yet we have a higher assurance of the reality of the idea than of the quality or body which the idea represents. The idea is external to us, yet it is surely known in God; but the world of material reality which the ideas represent is only a probable inference from the reality of the ideas themselves. « It is not necessary that there should be anything without like to the idea.» The only reality which is the object of perception — that is, of which we are immediately cognizant and certain — is the idea itself. And we must not suppose that these ideas are identical with the Divine substance or essence; they express only certain of his relations to his creatures. The consciousness, accordingly, of me, the finite, in apprehending those ideas, would be inaccurately described as identical with the Divine consciousness. In knowing those ideas, I am as far from the real inner essence of the Divine consciousness, as I am from the reality of the thing represented. He says, « it is not properly to see God, to see the creatures in him. It is not to see his essence to see the essence of creatures in his substance.» All that can be alleged is, that I the percipient and Deity have a common object of knowledge in the idea.

So far we can attach a meaning to this system. But the question arises, what does this vision of all things in God precisely mean? Does it refer to the perception of the qualities of body, however numerous, passing, contingent these may be in time and space? Are the ideas perceived in God as numerous as the actual qualities or things of experience? Then, what becomes of the unity and indivisibility of Deity? What is he in this case but another name for the sum of our experience? What is he but peopled space and time? Or does the vision in Deity refer merely to the laws and types of things under which perception and thought are possible?

Malebranche vacillates on this point. But he was finally driven to the latter conception. His idea in God came to mean the essence or type of the thing; and he names it intelligible extension. It is this idea which is in God, and which we see in God. Along with it God determines in us certain passing sensations—such as color, sound, heat or cold. These are in our consciousness, though confused: the idea is in God. It is the permanent essence. But what is this intelligible extension? Is it extension—that is, space, without limit or figure—conceived as infinite? Is this identical with the ideas of our perception? If so, how? Is this the world we are supposed to perceive in the representative idea? The idea of the figure, definite, limited? Again, what is the connection between this ideal and the real extension? Between space conceived as empty, and space perceived as filled with matter? The truth is, that such a position cannot be vindicated consistently with the facts of the intuitional consciousness. It means simply abstract or void space, and this is as far from the reality of the world, as possibility is from actuality, or absolute monotony from the variety of experience.

As to the nature of our knowledge of God, Malebranche differed in one important respect from Descartes; though whether it was an advance or the reverse is matter of question. Descartes distinguished the idea from the reality of the supremely perfect, and made the reality an inference from the idea. But just as Malebranche held that the soul is not known through idea, he held that Deity, or the Being of Beings, the supremely Perfect, is not known by us through idea. It is not conceivable that anything created can represent the infinite; that being without restriction, the immense being, can be perceived by an idea, that is, by a particular being and a being different from the universal and infinite being. One might suppose that in this case our knowledge of the supremely Perfect would be obscure, like our knowledge of the soul itself. But no. The soul is immediately united with the substance of God himself; we thus know him as he is in himself. On occasion of every apprehension of sensation even, or of bodily movement, we know the infinite. "If I think the infinite, the infinite is." This is the sole demonstration of Malebranche. Yet even while he seems to unite the finite consciousness to the divine substance, in order that, as more than finite, it may know this substance or itself, it turns out that it does not wholly know the substance; our apprehension is not infinite; we are, therefore, less than the infinite is.

This, then, is another and higher vision in God. The soul is now immediately cognizant of God in his essence; and, though only in a limited way, we thus see the infinite perfection of Deity and their relations. We see ideas, principles eternal and immutable; we perceive also truths — that is, the relations of those ideas. This is Reason — which is absolutely impersonal — common to all intelligences, human and divine. It is manifested in the form of speculative or metaphysical laws, and in that of practical or moral laws. The former are modifications of the idea of quantity, subsisting between ideas of the same nature; the latter of perfection or graduated order among beings of different natures.

Malebranche here made an advance beyond Descartes. The latter had founded the distinctions of true and false, right and wrong, beautiful and deformed, on the mere will of God. Malebranche very properly departed from this position, and founded those distinctions on the intelligence of Deity itself. The one supreme thing in the universe is the sovereignty of the Reason. It bends to the will neither of man nor of God. But there is nothing to show that he connects the doctrine of the Impersonal Reason with the hypothesis — the identity of the human consciousness with the divine substance or consciousness. This is not at all necessary to his doctrine, and it is not legitimately involved in it. On the contrary, our knowledge of the infinite is with him never coextensive with the reality. The fair issue of the doctrine of Malebranche regarding the infinite, which, to be intelligible, means the principle of universal truths, is that there is a common knowledge between man and God. But to say that the consciousness I am and experience, is the consciousness of God, or God's consciousness of himself, is to assume this convertibility, and it is either to abolish me altogether, or to abolish God; for it gives me a God convertible with all the conditions and limitations in essence and in time of a temporal consciousness.

The utmost identity predicable in such a case is a merely logical or generic identity. The human and the divine possess common laws of knowledge. This no more proves the identity of the human and divine intelligence, as existences, than the community of the laws of knowledge among human intelligents destroys the individuality and variety of the self-hood of each. The whole question as to the relation of me, the being in time, to an Eternal Being, stands just where it was.

X. Spinoza (1632–1677) — Relations to Descartes.

Leibnitz, speaking of the philosophy of Descartes, said it was the antechamber of the truth. At another time, he tells us that Spinozism is an exaggerated Cartesianism (*le Spinozisme est un Cartésianisme outré*). Again, he says, « Spinoza has cultivated only certain seeds of the philosophy of Descartes. » There can, I think, be no doubt that Spinoza was stimulated to speculation by Descartes; and also that he found in Descartes' writings certain points which, when exclusively considered, tended to suggest his own doctrines as a complement or development. But that he truly interpreted the main and characteristic features of the philosophy of Descartes, or carried out its proper tendency, or logically added to it certain results, I emphatically deny.

In the first place, Descartes' philosophy is by method distinctly one of intuition and experience. No one can read the *Method* without feeling that the writer is seeking relief from scholasticism, and that you have done with the Schoolmen — with their abstractions and their deductions. The healthy branch of modern experimental thought is there. You feel it in the *cogito ergo sum* — in the criterion of clearness and distinctness of ideas — and particularly in his first proof of the existence of God, founded on the fact of the personal existence and yet imperfection of being revealed in human consciousness. But Spinoza absolutely disdains experience and observation. To him a conviction or fact of consciousness, however deeply or thoroughly tested, by analytic reflection is nothing. He no doubt speaks of his philosophical method as reason founded on immediate intuition; but when we come to examine his intuition, it turns out to be merely definition — and arbitrary definition. There is no analysis of consciousness whatever — no founding on intuition or fact. It is the method of Pure Reason, all through — a return, disguise it as you may, to the method of scholastic abstraction and deduction. Spinoza professes to deduce the facts of consciousness, and consciousness itself, from the infinite substance and its attributes. And he holds, with Malebranche, that knowledge through consciousness and of the facts of consciousness is obscure and confused. Descartes no doubt aimed at deduction, but it was a deduction professedly founded on facts of consciousness as the clearest sphere of human knowledge. At the same time, he exaggerated the importance and the use of it; and there is an obvious tendency, especially in the *Principles*, to supersede his original or intuitive method by the demonstrative or deductive, — to fall away, in fact, from the investigation of the real unto the shadowy sphere of the abstract. At the same time, the order of the *Principles* may fairly enough be regarded as merely a synthetic way of putting the results of a foregone analysis. If Spinozism be regarded as in method a development of Descartes, it was not of his original and fruitful method, but of his later unfaithfulness in the use of that method.

Descartes' alienation from his original method of conscious verification arose mainly from his assuming that whatever is clearly and distinctly conceived in the idea of an object may be predicated as really true of that object. This, with all its obvious fallacy and confusion, was adopted by Spinoza, and carried to exaggeration by him, with a thorough indifference to the psychological method of Descartes, the only means of giving the idea truth, or relevancy to fact. With such a postulate, it is easy to see how Spinoza proceeded. We have only to get the preliminary idea of all things as clear and distinct, and then from this we can readily evolve all subsequent ideas or conceptions. The universe will then be comprehended by us not in its parts merely, but as a whole. The beginning of all will be grasped, and each part of the whole will be apprehended in its relation to the preceding part, and thus to the first of things. It will, accordingly, be known truly for what it is, because it will be known in all its actual relations to preceding facts, and in all its possible relations to succeeding developments. This is, no doubt, a very fine conception of the aim of human knowledge. Whether it is merely a dream or a reality is, of course, a matter of argument. If we could reach a knowledge of the absolute totality of being, or of the universe at any given point in its development, we should gain a knowledge which is absolutely convertible with all possible knowledge in each given stage; and if we could thus follow the evolutions we should make our knowledge convertible with, or representative of, the whole of actual and possible being. But such an ideal of knowledge is impossible, unless on the assumption that the totality of being can be first grasped by definition, as figure in mathematics, and its various possible combinations therefrom evolved. And this is merely to assume in method or premises what requires to be proved in result or conclusion. What would be our test of the completeness or adequacy of our definition? What, then, would be the guarantee of the totality of our knowledge in any given stage? The assumption of a casual relation between the stages does not help us, for we have to ascertain in the first stage the totality of the cause. And here, even on Spinoza's own admission, the doctrine must be held to break down. For while the first substance possesses an infinity of attributes, of these we knew only two — extension and thought. It is thus utterly impossible for us, through the grasp of these partial forms of being, to conceive all being, and follow the evolutions of its totality. This would be merely an illogical identification of the part with the whole,— reasoning, in fact, from the finitude of our knowledge to the infinitude of things.

Of course, Spinoza grandly distinguishes this demonstrative method of knowledge from that of vulgar opinion and belief. This is partial and abstract, and worth nothing. It does not see the connections of things, and thus fails of their truth. It proceeds without examination or reflection. It accepts common opinions. Spinoza's whole writing of this sort has been relegated long ago to the limbo of misconception, and should have been left there. It has been stated over and over again by the opponents of a demonstrative system of philosophy, that the alternative alone conceived by Spinoza, and alone contemplated by those who virtually accept his method, is a simple caricature of the method which they follow. It has been shown repeatedly that the common opinions of mankind (or THE COMMON SENSE of mankind, as it is called), form simply the materials of philosophical analysis and criticism. Hamilton, for example, tells us most explicitly that philosophy is not to be constituted by « an appeal to the undeveloped beliefs of the irreflective many,» but «through a critical analysis of those beliefs.» We may therefore set aside as utterly beside the point, as, in fact, due either to ignorance or perversion, the misrepresentations of the method of the psychological school constantly made by followers of Spinoza and Hegel. The question as to whether we can grasp the universe as a whole of development cannot even be fairly approached, until the upholders of the affirmative position show that they understand the nature of the psychological method.

What gives a somewhat ludicrous aspect to this misrepresentation of the psychological method, is the fact that when we come to examine closely certain points in the deductive systems, we find that, while despising psychology, they have really nothing to give us except this very common sense of mankind which they so haughtily reject. Spinoza, for example, the ideal of the man who had a contempt for common sense and all its accessories, is found after all to be dependent on it for his selection of the fundamental notions of his system. It appears that in his review of the notions current among mankind there are some which are inadequate and confused; others which are clear and distinct. Among the former class are Being, Something, Freedom, Final Cause; while among the clear and distinct are Cause, Substance, God, or the Infinite Substance. When we seek for some sort of test of this apparently arbitrary selection, we find that the former are relegated to unreality and untruthfulness, because they are *notiones universales* merely — meaning, possibly, generalizations. But the others, such as Substance and Cause, are held to be clear and true, because they are *notiones communes;* and when we ask what the meaning of this is, we find that they are something common to all minds and all things. What is this but an appeal to the common-sense of mankind, and in its unscientific and irreflective form? If, moreover, we apply the test of community in the things to the relegated notions of Being or Something, it will certainly occur to us that the distinction is one rather of caprice and petulance than of logical or consistent thought. Freedom and Final Cause stood rather in the way of his deduction; by all means, therefore, let them be set aside as obscure and confused. The truth is, that any deductive system is nothing more than a mere hypothesis, or has no basis higher than unsifted data, so long as it is not grounded on direct and complete pyschological analysis of the facts.

But even this misrepresentation is comparatively of little moment when we look on the deductive systems—such as that of Spinoza—in relation to the full contents of the human consciousness. It is here the principle of their method reduces itself to an absolute contradiction. The data which the method assumes, and from which it proceeds to develop the universe of being, have no higher guarantee than those very facts of human consciousness relating to Personality, Freedom, and Morality, which they undoubtedly subvert. It is here that the common experience of mankind, when psychologically tested as fact, comes into collision with the conclusions of the deductive system; and ere the facts of common experience are swept away, it must be shown that the so-called ideas of Substance and Cause have any higher or other guarantee in our consciousness than these other ideas, and are entitled to override them. What guarantee can any philosophy give for the idea of Substance for example, or even Pure Being or Pure Thought, which cannot be equally, even more, given for Personality and Freedom? I do not mean the Spinozistic or Hegelian caricatures of those ideas, but the conceptions of them actually given or implied in consciousness. A deductive system which sweeps away these conceptions must, in its spirit of superior wisdom, show how mankind, in their whole history and highest purposes and actions, have been deluded into believing themselves as more than the mere necessitarian movements with consciousness which Spinoza and Hegel allow them to be. But even if it can show this, it must do it at the expense of allowing the principles of moral action and of true speculative thought, to be, as a matter of fact, in diametrical contradiction. When the contest takes this form, we know which side must speedily go to the wall.

But take the method of Spinoza as a whole. What is the assumption on which it proceeds? Entirely the geometric method of conception, borrowed no doubt from things both latent and expressed in the writings of Descartes. This means postulates, definitions, and axioms. The geometrical definitions refer to one uniform idea, manifesting itself in various forms, but never transcending itself. This conception is the idea of extension, coexistent points or magnitude. It begins with the elementary perception of point, or the *minimum visibile;* it goes on to the generation of line and then of surface, or what we know ordinarily as extension. Now we need not consider either the source of the conceptions of point, line, and surface, or the guarantee of them. It is sufficient for our purpose at present to note that these are capable of definition, and that the knowledge which admits of being deduced from them, or the notion at the root of them, never passes beyond the initial conception. It is extension of line and surface at first; it is this and its relations all through. In fact, we are here dealing with abstractions. The definitions are abstractions, or, if you choose, constructions from data,—elementary data of sense. These data are unchangeable, irreversible by us, and hence they and their relations may be said to be necessary. Given certain definitions, we may, by means of postulate and axiom, work out the consequent truths or deductions to their utmost result as ideal combinations. This is the geometrical method. But is such a method at all possible either in Physics or Metaphysics? Here, confessedly, we deal with the real or concrete. We have to look at the contents of experience — of space and time; at what we call the phenomenal world; and we have to consider the relations or the parts of this world to the preceding parts, and to each other, as it were, all around. We have to look at it in time and space. This is the physical point of view. Metaphysically, we must still keep in view this concrete world. But the metaphysical questions relate to the nature of its reality, its origin, order, development. What it is, whence it is, how it has become, whither it is tending,—these questions cannot be discussed without dealing in the same way with the world of consciousness—with the nature, origin, and destiny of the Self or Ego in consciousness—as far as this may be competent and consistent with the conditions of intelligibility. Without doubt those contents are in time, or in time and space. They are the materials which we have to examine—if possible, to deduce in their order. We have to show, in fact, on such a method, the causal relations of the whole terms of reality; we have to show also the necessary connection of every idea—certainly of every universal idea, be it form of perception or of thought proper—in the human consciousness. We must, in a word, deduce from some primary conception—some primary possibility, clearly and distinctly conceived, the typical idea, at least in every physical generalization, the universal law or condition which is in every act of human cognition.

Now the question is, Is the method of Spinoza—is, in fact, any deductive method whatever—able to do this? Let us look at the physical problem as undertaken by the deductive method. « Real and physical things,» Spinoza tells us, « cannot be understood so long as their essence is unknown. If we leave essences out of view, the necessary connection of ideas which should reproduce the necessary connection of objects is destroyed.»

Now we shall not ask the method to condescend to the contingent facts of time and space—to the passing individuals of the moment. We shall test it simply by general ideas. We shall ask it to show that one form of concrete being can be the ground of the anticipation or prediction of another, which we have not yet experienced as following from it, or in connection with it. Would the clear and distinct knowledge of the constituent elements of a body enable us in any case beforehand to predict its sensible effect, provided this effect is specifically different in its appearance to the senses from the original body or cause? In the case, for example, of two given chemical elements, could any analysis of these enable us even to conceive or to anticipate, far less determine necessarily—apart from experience of the actual sequence — the character of the new resultant body? Even suppose there were the most perfect mathematical knowledge of the proportions of the elements, would it be possible to pass from this numerical knowledge to the new object — say from two gases to the fluid we call water? No scientific inquirer would maintain such a position, and he would be wholly right.

But the case is much stronger when we have a sensible body appreciable by one sense the effect of which is an impression or quality apprehensible only by another sense. Suppose we have a complete apprehension of the particular molecular motion which precedes the sensation of heat, should we be able simply from this knowledge to predict, even conceive, the wholly new sensation absolutely apart from any given sequence in which it occurred? The thing is impossible. Motion is an object of one sense, heat of another. In other words, there must be an appeal to a new form of organic susceptibility. The same is true of the vibration preceding sound; of the molecular motion issuing in light or color; of the pain or pleasure we feel from sensational stimuli; of every effect, of food, or poison, on the human organization; indeed, of the whole sphere of physical causality. The truth is, that if this method of deduction were possible in a single instance, there would be no logical barrier to our deduction of the whole ideas embodied in the laws of the physical universe out of the primordial atoms. And if the impossibility of anticipation hold in one case, it will hold in all. Hence the conclusion is obvious, that even if we knew the actual state of the totality of phenomena in the world at any given time, we should be utterly unable to predict through this its actual state in the subsequent moment. But an absolutely demonstrative physics is about the vainest of dreams. Physical sequences cannot even be anticipated after this fashion; far less can they be necessarily determined.

But does this method fare any better in Metaphysics in the hands of Spinoza?

1. Its first requirement is clear and distinct ideas of what are assumed as ultimate metaphysical conceptions, — the *prima possibilia* of Leibnitz. This knowledge is given in the form of definitions, — eight in number. We have definitions among others, of Cause (self-cause), Sub-

stance, Attribute, Mode, God, Eternity. Of these the primary idea, as shown in the propositions which follow, is Substance. God is defined «as the being absolutely infinite—*i. e.*, the substance consisting of infinite attributes, each of which expresses an infinite and eternal essence.» And we are told that «that which is absolutely infinite includes in its essence everything which implies essence and involves no negation.»

2. It is assumed that what is involved in these definitions, and capable of being evolved out of them, according to a process of reasoning or manipulation of the terms, constitutes our knowledge of the whole called the Universe of Being.

3. It is assumed, further, that we can gain by this process new and explicit conceptions of the variety of the contents of the Universe: can, in fact, determine what they are, can only be, and must be. This knowledge comprises both material and spiritual reality; both the spheres of extension and thought or consciousness.

Now, first, looking at these definitions, will it be said that we have anything like a clear and distinct knowledge of the meaning even implied in the terms in which they are couched? Take, for example, the definition of substance, which is really at the root of the whole matter. Spinoza tells us that by substance he understands «that which exists in itself and is conceived *per se;*» in other words, «that the conception of which can be formed without need of the conception of anything else.» As thus stated, there can of course be but one substance. Have we even any such conception as this? Is this expression more than a mere form of words? Is there anything in experience or consciousness into which these terms can be translated? Consciousness, which is all-embracing, implies discrimination of thinker and thought or object,—a relation between knower and known. Can an object corresponding to the terms of a substance existing in itself, and conceived *per se*, appear or be in my consciousness? There can be nothing before it; there can be nothing else along with it; it must be at once thinker and thought. It must be the simple indifference of subject and object, absolutely beyond every form of predication. Is the realization of such an object in our consciousness compatible with the conditions of intelligibility or meaning? Yet it is of this we are said to have a clear and distinct idea: — and it is from this that we are able to deduce the Universe of Being.

Now, let us compare this conception of Substance with the same notion in the system of Descartes. « By Substance we can conceive nothing else than a thing which exists in such a way as to stand in need of nothing beyond itself in order to its existence. And in truth there can be conceived but one Substance which is absolutely independent, and that is God. We perceive that all other things can exist only by help of the concourse of God. And accordingly, the term SUBSTANCE does not apply to God and the creatures univocally.» Again, he says: « By the name God, I understand a Substance which is infinite [eternal, immutable], all-knowing, all-powerful, and by which I myself and everything that exists, if any such there be, was created.» He tells us that « Substance cannot be first discovered merely from its being a thing which exists independently, for existence by itself is not apprehended by us. We easily, however, discover substance itself from any attribute of it, by this common notion, that of nothing there can be no attributes, properties, or qualities; for, from perceiving that some attribute is present, we infer that some existing thing or substance to which it may be attributed is also of necessity present.» This is obviously a totally different conception from that of Spinoza. Descartes denies entirely the apprehension or conception of being *per se.* Even his infinite Substance implies predication and relation. And the notion Substance implies experience to begin with, and a relation involved in experience. Here, at least, the conditions of intelligibility are not violated. We can put a meaning into the words without intellectual *felo de se.* And yet we are told that Spinoza simply carried out the principles of Descartes. If to reverse the principles of a system as a starting-point is to carry them out to their logical results, Spinoza has that merit. What he did really was to take one element of a complete experience, or implicate of experience, and to set up, as a first or starting-point, the abstraction which he illegitimately severed from the intelligible conditions recognized by Descartes.

But what of the relation of those ideas to experience or reality? Are they adequate conceptions of what is?

They are conceptions or definitions, no doubt, framed by the mind; and by help of postulates and axioms all their implied relations can be evolved out of them. But what then? Do they or their relations touch experience at all? Supposing we get the primary conception of all things, the question arises, What is the relation of the conceptions following this and flowing from it to the order of things? Now here we have the gross incongruity of the Spinozistic method. One might have expected that, if clear and distinct conceptions are to be set at the head of reality, clear and distinct conceptions following them in necessary order would have been all that is necessary, or at least all that we could legitimately get from such a hypothesis. But no. It seems that those ideas are essentially representative of things. The definitions or hypotheses set at the head of the system express the essence, the inner nature of things — otherwise they are useless. There is a dualism, therefore; there is an order of things as well as of thoughts; and there is a complete correspondence, or, as he expresses it, identity between the order of ideas and the order of things. And thus *id quod in intellectu objective continetur debet necessario in natura dari.* Here we are back again at subjective and objective. There is the subjective idea — the clear and distinct idea corresponding to the objective reality. But what guarantee have we, on the system, of an objective reality or order of things at all? How do we pass from clear and distinct idea of Substance or Cause to what lies entirely beyond the order of ideas? What legitimate deduction can be made from clear and distinct idea, except only another clear and distinct idea? And can this be regarded as representing something called nature, which, in the first instance, it never directly knew? From the primary, clear, and distinct idea, if you can get it, you may also get its sequences; but these will only be ideas following on ideas. The conception that they are representative of an order of things beyond them, or that there is such an order at all, is a mere hypothesis, and one wholly illegitimate.

But Spinoza grounds the notion that there is a correspondence between thought and extension, so strict that the former is the mirror of the latter, on their supersensible identity in the same substance. He says that mind and body are "unum et idem individuum, quod jam sub cogitationis sub extensionis attributo concipitur." Extension and Thought are thus said to be two fundamental attributes of the same substance, therefore really the same, differing only in appearance or phenomenally. Bodies are modes of the former; finite thought or souls are modes of the latter. Hence the representative order of ideas corresponds to the formal order of nature. As an expositor has expressed it, "Soul and body are the same thing, but expressed in the one case only as conscious thought, in the other as material existence. They differ only in form, so far as the nature and life of the body — so far, that is, as the various corporeal impressions, movements, functions, which obey wholly and solely the laws of the material organism, spontaneously coalesce in the soul to the unity of consciousness, conception, and thought." It is needless to criticise language of this sort, though commonly enough to be met with. It has neither coherency nor intelligibility. It slurs over the real difficulty of the whole problem, as to whether the unconscious nerve-action can pass or be transmuted into any form of consciousness: it does not even touch the question of proof, but takes refuge in mere assumptive verbalism. Nor is it of the slightest moment to the argument to say that extension and thought are related as common attributes to the one substance. This, even if established, means simply that they are supersensibly one; whereas the question before us is as to their correspondence or identity in our experience.

But is this conception of Substance, or God, truly convertible with the Reality? Can we at any one time, in any one act, or in any one category of thought, embrace Being in its all-comprehending totality? This is the real pretension of Spinozism. We can have a thought — viz, that of Substance within which lies the whole content of Being, only waiting development. The assumption here is that Notional Reality, called sometimes Thought, is identical with Being, and that in its evolutions and relations we find the true Universe. But such a conception is an impossibility from the first. Bare, or mere being, mere IS or ISNESS, is all which such a conception contains. Extensively this embraces everything actual and possible; but it is not, in the first instance, even conceivable *per* *se*, any more than the isolated singular of sensation is; and, in the second place, it has of itself no comprehension or content. It is incapable of passing into anything beyond itself. Hegel would object to Spinoza's position here, by saying that while he was on the right line he made his substance « a pure affirmation,» incapable thus of development. When Spinoza made it that, he made it too much,—more than the indeterminate or unconditioned was entitled to. And when it is sought to be added that « pure affirmation » must be held to imply « negation,» we are simply glossing over the difficulty by applying to so-called notions of what is above experience, conceptions and laws which have a meaning only in the sphere of objects in definite consciousness. Moreover, a notion which issues necessarily in negation, which goes « out of itself,» in the metaphorical fashion of the dialectic, and so returns enriched—with its negation absorbed—is quite entitled to be relegated to the sphere of the very « purest Reason.»

Spinoza's demonstration is, in short, the grossest form of petitory assumption. It is not even attempted to be proved that the definitions of substance and attribute and mode, with which he starts, have objects corresponding to them in experience. All that is alleged as a ground of this is the clearness and distinctness of the ideas. Nay, it is the boast of the system that objects are deduced from them, and set in their necessary relations. But the definitions are merely postulates. All that can be claimed for them is this character: Let the term substance stand for so-and-so; let the terms attribute and mode do the same,—and here are the necessary consequences. But this cannot give more than a hypothetical system of formal abstractions; and what is more, it can yield only petitory conclusions. Before the system becomes real and typical of experience, it must be shown that the definitions correspond to objects of experience. This, however, cannot be done; in fact, they are assumptions, which transcend experience from the first; and if it could be done, it would be fatal to the system as one of pure reason. Nay, it cannot even be shown that the method has a right to the use of the terms Substance, Attribute, and Mode at all. These are simply stolen from the language of experience. And as to the definition of substance itself, it is essentially empty; for, as has been remarked, the substance defined is neither clearly conceived as the subject of inherence nor as the cause of dependence.

The contrast is not the less if we look at the results of the two methods. The analytic observation of Descartes yields a personal conscious being—and a personal conscious Deity, with definite attributes given to him on the analogy of our experience. The deduction of Spinoza, starting from a purely indeterminate abstraction called substance, gives us, as the only reality of the Ego, a mode of thought, or a collection of the modes of thought. Thought and Extension are the two attributes of this indeterminate substance, which, as such, is neither, and yet both. Of these attributes, again, there are modes; and the modes of thought are ideas, and the soul is one of those ideas, or rather an assemblage of them. This is man,—it is simply an anticipation of David Hume's «bundle of impressions.» This we may substitute for the personal Ego of Descartes.

If we look a little more closely into the matter, we shall find that the vaunted idealism of Spinoza is really, when brought to the test, the merest vulgar empiricism. Something he calls idea is the root or ground of the human soul. But we are immediately told that idea means nothing apart from object or *ideatum*. But what is the *ideatum?* It turns out to be body. The body makes the idea adequate or complete. We have constant asseveration of this point. The whole system of Spinoza is a roundabout way of coming to say that finite thought is an act dependent on object for its reality, and this object is body. Now we may here fairly set aside the big talk of the system about substances and conceptions. It turns out that the only thought we really know is dependent on body or organization. We had substance to begin with,—the pure idea; yet when we come to our own consciousness, this does not come down in the line of thought from the infinite substance. This is dependent as with Hobbes or Gassendi, on a bodily organization, begged in knowledge for the sake of giving reality to finite thought! What, when tested in experience does all this come to, except the most vulgar form of empiricism? If idea—the movement of finite thought — be impossible unless as cognizant of bodily object, and object be essential to its reality, — what is it but a reflex of organization? Of course I may be told that extension is an attribute of Deity, and that, in knowing it, I know God. But I am afraid that if every act of knowledge even in sense is constituted by the object or *ideatum* called body, I must be limited to that object and its sphere. And as any hypothesis about substance and its attributes must be regarded by me as a mere form of doubtful imagining, Spinoza is merely the precursor of those specious high forms of idealism, which in their essence coincide actually with the lowest forms of empiricism and negation. Like empirical systems, they really abolish difference, and thus may be expressed equally in the language of the lowest sensationalism and the highest idealism.

But what adds to the marvel of the whole matter is that this idea, which we venture to call SELF or SELF-CONSCIOUSNESS, is really the reflex of certain bodily movements. These are forms of extension, no doubt; yet their reflection is what we must take for the unity of mind. In other words, the sum of movements in the body, becoming object of the idea, gives rise to the conception of the unity of self. The idea has nothing except what it gets from the *ideatum*. This is a series or assemblage of bodily movements; and these, mysteriously reflected, form in consciousness the hallucination of self and self-identity. Should we not be thankful for demonstration in metaphysics!

We have seen what kind of Deity Descartes found and represented. What is the Deity of Spinoza? It is this Substance, if you choose. But taken in itself, it is wholly indeterminate; it has no attribute. Yet it necessarily clothes itself in two Attributes, which we chance to know — viz, Thought and Extension. But Divine or Infinite thought is not conscious of itself, is not consciousness at all. It knows neither itself nor its end; yet it works out through all the fullness of space and time. It is the blind unconscious immanent in all things, — in what we call souls, and in what we call bodies — in consciousness and extension. Deity in himself thus, as *natura naturans*, is utterly void of intelligence: he is at the best a possibility of development into attributes and modes; though how he is so much, being wholly indeterminate to begin with, it is hard to see. Such a Deity is incapable of purpose or conscious end. He is an order of necessary development without foresight; he knows not what he is about to do; it is doubtful whether he even knows or cares for what he has done. He has neither intelligence to conceive, nor will to realize a final cause. He is impersonal, heartless, remorseless. Submit to him you may; nay, must. Love him you cannot. His perfection is the sum simply of what is, and must be. Call it good or evil, it is really neither, but the neutrum of fate. This Deity of Spinoza was neither identical with the Deity of Descartes, nor is it a logical development of his principles. It is a Deity simply at once pantheistic and fatal. And this is not a necessary or logical conception following from the free and intelligent creator of Cartesianism. It is in the end but another name for the sum and the laws of things; and throwing out intelligence from the substance at starting, it illogically credits it with ideas in the shape of modes in the end. The Deity of Descartes was an expansion of a personal consciousness; not, as this is, and is necessarily; a simple negation alike of intelligence and morality.

The lowering, almost effacing, of individuality in the system of Descartes, is no doubt the great blot, and that which most readily led to Spinozism. When ME CONSCIOUS as a fact is resolved into thought as the essence of my being — and when the external world is stripped of every quality save extension, and is thus reduced to absolute passivity, — we are wholly in the line of abstract thought. We are now dealing with notions idealized, not realities, or notions realized. The *res cogitans* and the *res extensa* are essentially abstractions. The life we feel in consciousness, the living forms we know in nature, are no more. We are on the way to the modes of Spinoza, but we are by no means called upon to accept either his identification of those entities, — thought or extension — or to embrace the incoherent verbalism of the indeterminate substance and its attributes.

The indistinctness with which Descartes lays down the position of the conservation of the finite is a point which no doubt suggested a kind of Spinozistic solution. He makes conservation as much a divine act as creation.

There is nothing, he holds, in the creature itself, or in the moments of its duration, which accounts for its continued existence. Divine power is as much needed through time for this continuity of life, as divine creation was needed at the first. This doctrine might conceivably be regarded as implying that the actual power or being of the creature is at each moment a direct effect from God, or, as a pantheist would put it, a manifestation of the substance immanent in all things. This latter was of course the Spinozistic solution of the problem. But the idea of dynamic force of Leibnitz,—the self-contained and self-developing power of the monad—going back to the one primitive unity, or original monad of all, and yet preserving a certain temporal individuality,—was a more logical solution and supplement than the immanent substance of Spinoza. God acted once and for all. He delegated his power to finite substances. Though these could not act on each other, they could spontaneously act. The true disciple of Descartes is thus not driven necessarily to the Spinozistic solution, even if we throw out of account Geulincx's doctrine of Occasional Causes. The logical successor of Descartes was certainly Leibnitz, not Spinoza. It was Leibnitz who caught the true spirit and the essential features of the system, and in many ways carried it on to a broader and fuller development. Spinoza's was a retrograde movement into the antiquated verbalistic thought.

Not satisfied, apparently, with contradicting the consciousness of man in personal experience and in history regarding himself and his nature, Spinoza ends by contradicting his own speculative system, in setting up a theory of morals. First of all, man, the subject of moral obligation is a temporary necessary mode of the infinite attribute,—unconscious thought; and all his poor thoughts and volitions, are equally necessary developments. Yet he is to be held as capable of moral action and subject to moral law. Surely such a conception should in proper Spinozistic fashion be rigorously put down as a mere illusion, on the part of the mode of consciousness which conceits itself to be, and to be free, when the only reality is the Infinite, and there is nothing in time or space which is but as it must be, or rather nothing save necessary appearance.

Spinoza was logically right when he said that there is no good or bad with God; that repentance is a weakness unworthy of a man of true knowledge. But an ethic after that is an impossibility.

But it may be said, and it is attempted to be made out, that the finite or differenced reality is a necessary part of the Infinite—is developed from it as a part of moment,—that this is a manifestation of the Infinite—that it is as necessary to the Infinite as the Infinite is to it. Without meanwhile questioning the assumptions here involved, I have to ask, How far does such a doctrine lead us? The finite or thing differenced from the Infinite has various forms. What reality can there be in finite knowledge? Difference and distinction are merely in appearance. The yes and the no, the true and the false, the good and the bad, the veracious and the unveracious, are merely in seeming and appearance. Each is an abstract view: the real behind all this show is the identity of their difference; it is the Infinite out of which they come, and into which they are to be withdrawn. This Infinite is an identity of all thoughts and things. In this case, is not the whole of finite knowledge and belief a simple illusion—a deceit played out upon me the conscious thinker? In fact, it subsists by difference—YES and NO are finite determinations, and they are differences. Are these equally manifestations of the Infinite in every given notion? In that case everything I assert as true is also false, and the false is just as much a manifestation of the Infinite as the true is. I oppose justice and injustice—veracity and non-veracity: these are different—opposite. Their very reality consists in the difference between them being and being permanent. But if each is a manifestation, and a necessary manifestation, of the same transcendent being or infinite, if this infinite is in them equally, and they in it equally, then they are really the same; and as the Infinite goes on developing itself, we may well expect their final absorption or identification. This doctrine of a necessary manifestation of the Infinite in every finite form of thought, in every general idea, is, if possible, worse as a moral and theological theory than even the vague indefinite of Spinoza. But such an Infinite is really empty phraseology. It is the mere abstraction of being, without difference or distinction, subsisting equally in all that is. To say that it is the ultimate truth of all is merely to say that all the differenced IS; hence all the differenced is the same.

A philosophy whose logical result is the abolition of the distinction between good and evil, or the representation of it as only a temporal delusion,—which scorn repentance and humility, and the love of God to his creatures, as irrational weaknesses,—may be fairly questioned in its first principles. It may call itself the highest form of reason, if it chooses, but it is certain to be repudiated, and properly so, by the common consciousness of mankind. It is an instance, also, of the injury to moral interests which is inseparable from the assumption involved in a purely deductive or reasoned-out system of philosophy, that knowledge must be evolved from a single principle,—possibly a purely intellectual one,—whereas the body of our knowledge, speculative and ethical, reposes on a series of co-ordinate principles, which are mutually limitative, yet harmonious.

It is claimed for Spinoza as a superlative philosophical virtue, that he was entirely free from superstition,—had a hearty and proper abhorrence of what is called common-sense,—held ordinary opinion as misleading, being abstract and imaginative. He was thus the proper medium for the passage of the immanent dialectic, a proper recipient of the rays of the «pure reason.» This enabled him to see things in their true relations,—their relations to each other, and the whole which they constitute,—and to see also that things are not to be judged by the relation which they may appear to have to man. The truth on this point is, that he was a man of extreme narrowness, and incapable from his constitution of appreciating the power and the breadth of reality, and shut out nearly from the whole circle of true and wholesome human feeling. His freedom from superstition as seen in the light of his critical exegesis, means a total ignoring of the supernatural or divine element in revelation. Miracle is in his eyes impossible, to begin with, and prophecy is only an ecstatic imagination. His contempt for common-sense and common opinion is so extravagant, that he wholly misses the germ of fact which gives life and force to these, and which a careful analyst of human nature cannot afford to despise. From this bias he failed entirely to appreciate psychological facts, and properly to analyze them. This analysis, carried as far back as you choose, shows that personality, free-will, responsibility, are immediate internal convictions which lie at the very root of our moral life. But these, however well guaranteed by consciousness, are to be mutilated or wholly set aside in the interest of a narrow deduction. The conviction of free-will is a delusion. We have only forgot the necessary determinations. Will and intelligence, two of the most obviously and most vitally distinct factors in our mental life, are submitted to no proper analysis. They are simply identified. Spinoza was wholly destitute of imagination; he decries it; and it is deemed sufficient to put it aside from philosophy as subject to no other conditions than those of space and time. But imagination, of its appropriate kind, is as necessary to the philosopher as to the historian or the poet. It is the means of keeping his abstract thought vital,—of helping to realize its true meaning, individualizing it and saving it from verbalism. In a philosophy which professes to represent the universe in its absolute totality, why should the function of imagination be mutilated or ignored? This leanness of spirit in Spinoza is not atoned for by the force of his reasoning. It only becomes painfully apparent in the series of statements said to be demonstrated, and in the arrogant spirit with which he treats both Aristotle* and Bacon. The truth is, that his demonstration has no true coherency. It is faulty in its most vital point,—the connection between the indeterminate or Substance, and the attributes of Thought and Extension, or indeed any attribute whatever. It was an attempt to reduce the universe to a necessary order of development. But this necessary order is wholly incompatible with an indeterminate basis. Such a necessity of development is itself a determination or attribute, and one that begs the whole possibility of anything flowing from such a basis. The attribute of Thought, moreover, given to Substance,—*i. e.*, Divine or Infinite Thought,—is wholly void even of consciousness; and yet this is ultimately to develop into the modes of

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*He speaks of «a certain Greek philosopher named Aristotle» (*Tractatus*, c. vii.); and Bacon is «a little confused.»

consciousness known as human souls. This involves the absurdity of supposing that the unintelligent Substance as virtually a cause or ground, ultimately issues in intelligence. A demonstration of this sort is the merest incoherent verbalism.

XI. DEVELOPMENT OF CARTESIANISM IN THE LINE OF SPINOZA — OMNIS DETERMINATIO EST NEGATIO.

ACCORDING to Spinoza's interpretation of Descartes, the latter is represented as holding the finite — whether self-consciousness or extension — to be mere negation. The real is the infinite substance which grounds these. Even if this interpretation of Descartes were shown to be erroneous, which it is, Spinoza would yet force this meaning on the principles of Descartes — especially by means of the principle, or at least the assumption, involved in it — *Omnis determinatio est negatio.* This principle, though only incidentally stated by Spinoza, is, we are told, the whole of him. It certainly has been most profusely used by those who have followed him in the same line, and it is accepted by Hegel as virtually the principle of his own dialectic. It is necessary, therefore, somewhat fully to examine it in itself and its bearings. A precise analysis of its real meaning should help to settle the validity of a good many important applications of it. The Spinozistic line in relation to Descartes is mainly this, — that self-consciousness and extension as definite or positive attributes — as, in fact, implying limit — are necessarily negative of what is above and beyond themselves. In fact, they do not imply the presence of the real by being positive or definitely self-consciousness and extension. They, in this respect, rather imply the absence of the real. And it is only when limit or definiteness is removed from them that they become truly real. The true real is the infinite substance — rather, perhaps, the indeterminate. Accordingly, neither the self-conscious Ego nor the reality extension have any proper existence as individual substances or things. Whatever reality they may have is only a mode of that which has absolutely no limit, or more correctly, of that to which no limit has been assigned — the indeterminate.

1. The principle expressed in the phrase, *Omnis determinatio est negatio* is, as employed by Spinoza, identical with that of abstraction from limit. For the limit of the individual requires to be removed at each step of progress to the only true reality, the indeterminate substance. But before I examine this meaning of the phrase, it is necessary to consider it in its general signification, and to see especially how, since Hegel gave it its full development, it has been accepted by him and by writers of his school.

This principle of determination is explicitly stated in the Logic of Hegel (I quote from the Logic of the *Encyclopædie*), as far on as § 91, where, under Quality, he tells us that "the foundation of all determinateness is negation (as Spinoza says), *Omnis determinatio est negatio.*" Hegel has got by this time to Quality,—There and Then Being—as a stage in the deduction from Pure Being. It is necessary, therefore, to look back for a moment at the previous stages of the dialectical process, and to see how this principle is now stated for the first time. We have previously the pre-suppositionless stage of Pure Being, with its necessary implicate Naught or Non-Being, and the resumption of the two moments in Becoming. We have the whole pretension of the dialectic laid bare. We have the pre-suppositionless Pure Being; we have its necessary self-movement into its opposite, and the inter-connection of the moments summed up in Becoming; the pretension that those self-evolved determinations are the predicates of Being. Out of Becoming, as a fresh starting-point, we have the moment of Quality (*Daseyn*), determinate Being in Space, and Time,—Something (*Etwas*). This may be regarded as the first step of the dialectic in the region of definite cognizable reality. I do not at present propose to discuss those positions fully. If I did, the first question I should ask would be whether there is here an absolute pre-suppositionless beginning. I should certainly challenge the statement that pure Being as a thought is pre-suppositionless. Such a thought or concept is only intelligible in my consciousness; and the process, at least, must take place there as the abstraction from, and therefore the correlative of the concrete being which I already know, from a source different from pure thought. Hegel's pure Being is just as much a shot out of a pistol as Schelling's intuition of the absolute, which he so characterizes. The truth is, that pure being as a simple abstraction from the conditions of apprehended Being supposes an abstracter — an Ego, or thinker, whose thought also is a correlative condition of its possibility, and who, therefore, is at the beginning as much as the pure Being is. Take the basis of the system as pure Being, or as a concrete Some-being of consciousness, how is either of these guaranteed to us? We have seen what is the guarantee of Descartes. It is intuition regulated by non-contradiction. But what is the guarantee of Hegel's basis? Mere *is*, or being, is an abstraction from immediate consciousness. What guarantees this consciousness? What grasps this abstraction? Nothing whatever in his system. There is nothing to give the one; there is nothing to guarantee the other. He has thrown away the possibility of even holding the pure being as an abstraction: for it is an abstraction from subject and attribute — from self-consciousness and its act. The *isness* of pure Being is *ex hypothesi*, not deduced; it is as little guaranteed. It is the merest meaningless abstraction. On the other hand, reinstate self-consciousness and its act of abstraction: this act is a process of consciousness, as much as the act of doubt is; and the basis now is not mere Being, or pure thought; it is the very definite one of a self-conscious thinker, who is the ground of the abstraction and of the whole process of development, instead of being a stage or moment merely in the development. This self-consciousness is not deduced at least; and no guarantee can be found for it save intuition and non-contradiction.

2. I should deny, further, the thought of pure Being *per se*, as a beginning; or a point from which any movement of thought is possible. How can pure Being be supposed capable of movement, or of passing into Nothing, and thence gathering itself up into the unity called Becoming? Can the abstraction pure Being or mere Being as conceived by my intelligence, pass into anything to be otherwise named, or worthy of being so named, because of a difference between the two? This notion can pass into another notion, *ex hypothesi*, only from itself, — of its own power of motion. We are told that it does so pass, and it must so pass. How? Because it has

in itself an inherent negation, it must negate itself,— place against itself its simple opposite or contradiction. It is not meanwhile explicitly said which of the two. Now I say in reply that the concept of pure Being— mere qualityless, indeterminate Being, is utterly inconsistent with the concept of any inherent necessity of negation or movement whatever. Movement and necessity of movement are determinations—qualities or predicates which are wholly incompatible with a purely indeterminate concept as a beginning. Pure Being is the mere Dead Sea of thought, and once in it there is no possibility from anything it contains of anything whatever different from itself, or worthy of being named as different, being evolved out of it. And if it is said that the mere concept of pure Being involves the concept of its opposite, non-Being, I say, in reply, in that case, the beginning was not from pure Being, but from the correlation of Being and non-Being, and there never was any movement or dialectical passage in the matter. When thus it is said, for example, that « pure thought » must issue in a world of space and time,— that it cannot rest in itself,— we have a virtual confession of the impossibility of conceiving « pure thought » *per se*, and therefore, of any progress or movement from it as a starting-point. The world of time, at least the singular or concrete, is necessary even to its existence as a consciousness at all from the very first. It means, in fact, that the universal side of knowledge cannot be realized or conceived *per se*, and as such cannot be the ground of any evolution. To tell us that « pure thought » is synthetic, is simply a form of words which covers the begging of the two points at issue,— first, whether there is pure thought to begin with, and whether PURE thought can be qualified as synthetic or anything else. The real meaning of synthetic here is, that it expresses a relation already assumed between the universal and particular, while it is meant to suggest evolution or development of the latter out of the former.

3. Besides, to say this—that these two contradictories are involved in a concept—is to give up the professed problem of deducing the one from the other—that is, of solving the contradiction; it is to assume simply that the contradiction already exists, and that the concept embodying it is thinkable. The truth is, that so far as

pure thought or pure Being is concerned, there is and can be no movement. The Becoming which is conjured up to express its completion is not a product of pure thought at all; and it might further be readily shown that this concept which is said to unite the opposites does not really do so. It has no unity for absolute Being and absolute non-Being. Nothing must always be less than Being. Becoming, moreover, is a concept which has meaning in relation to a definite experience, where a determinate germ or form of being rises to its own completeness, or totality, as the seed to the tree. But it is wholly inapplicable as a notion to the abstractions Being and Not-Being — the falling of one abstraction into another, or the stating the same qualityless abstraction in different words, and deluding oneself that one has got different concepts even as moments.

4. But the pretension of the dialectic is, that there is here from the first an application of the movement of negation. Negation is the impulse of the whole dialectic; it is the means by which pure thought moves from its mere in-itselfness to the successive assertions or determinations of thought and being, to quality, quantity, substance, and so on. Now I challenge the dialectic in the first place with a double use, and an abuse, of the principle of negation. It is applied equally to the indeterminate and the determinate. It is, first of all, applied to the mere pure qualityless abstract of being. This is not even something, not an *Etwas*, it is not in this or that space of time — it is, to begin with, above relation and category of any sort, it is not compassable by the intuition of experience, or by the concept of the understanding. The question is, Can you apply to this the laws of identity and non-contradiction? Can you have either affirmation or negation in any proper meaning of those words? Can it be said that the mere indeterminate, call it Being or Thought, is identical with itself or different from another? Or can an opposite of any sort be put against it? The laws of identity and non-contradiction are well known as to their nature and essence. The nature of opposition, especially contradictory opposition, in any form, implies a definite or determinate to begin with. Something is at least cognized; nay, besides qual-

ity in general, even definite attribute or class, ere the negation can have a definite application or real meaning at all. But how can the laws of identity and non-contradiction apply, when the alleged starting-point is wholly indeterminate, not even fixed as this or that? There is only the mere abstract IS or ISNESS; but this is in everything that is. It is thus impossible to negate except by the mere abstract is-not. And as the former is not yet applied to anything definite or determinate, not even to something, there is only a possible negation, or rather an abstract terminal formula, which we know cannot be applied to two definite concepts at once, but which is as yet applied to neither. This is a purely hypothetical formula; there is as yet no actual negation, for there is as yet not even THIS or THAT to which such a formula can be applied. The purely indeterminate cannot be actually negated, for the reason that the negation is as much the indeterminate as the so-called positive is; and, therefore, there is nothing to oppose it either as contrary or contradictory.

The delusion thus propagated by the Hegelian logic is, that this vague notion of being,—this mere indefinitude —in fact, even mere qualityless being,—has in itself a power of development. It has really nothing of the sort. We rise out of it through a definite and accumulating experience—not through a logical or rational development. This indefinite is mere extension—mere generalized empty width,—and unless experience of differences or differenced things come to our aid, it will remain the same vague indefinite for ever to us. The facts or details of our experience or knowledge cannot be filled up by any deduction from mere IS or ISNESS,—even from knowing that something is. It is predicable of those different facts or details; but they cannot be evolved from it. In other words, the things or kinds of things in the universe must be known quite otherwise than by mere inference from our first knowledge. This source of knowledge is simply a successive and varying experience, having nothing in common with the IS or ISNESS of the starting-point, except that such an element is involved in each new experience. And even though IS gave the thought of difference,—the IS-NOT,—this would imply no real being or possibility of advance.

This is but a mere ideal negation, which a bad logic galvanizes into a positive or reality.

5. But it may be supposed that the dialectic reaches stronger ground when it comes down to Quality or Determinate Being. Here it is emphatically proclaimed that *Omnis determinatio est negatio*,—that every determination not only implies but IS literally negation.

Let us hear how Hegel himself states the point:—

« Quality, as existing determinateness in contrast to the negation which is contained in it, but is distinguished from it, is Reality. Negation, which is no longer an abstract nothing, but a There Being and Something, is only form in this; it is other Being. Quality, since this other Being is its proper determination, yet, in the first instance, distinct from it, is Being for another,—a width of Determinate Being, of Somewhat. The Being of Quality as such, contrasted with this reference connecting it with another, is Being-in-itself.» « The foundation,» he adds, «of all determinateness is negation (as Spinoza says *Omnis determinatio est negatio*).»

Again: « Being firmly held as distinct from determinateness, the In-itself Being, were only the empty abstraction of Being. In There-Being, determinateness is one with its Being, which at the same time, posited as negation, is bound, limit. Accordingly Other-being is not an equal or fellow external to being, but is its own proper moment. Something is, through its quality, first finite, second alterable, so that finitude and alterableness belong to its being.»

6. Now we know two kinds of negation, and if Hegelianism knows a third, let it vindicate it articulately. In the first case, we have pure or simple logical negation. We can deny what a concept holds or affirms absolutely or merely, without putting anything whatever in its place. We can negate A by not-A,—ONE by NONE,—SOME by NONE,—and the result is zero. We can negate, on the other hand, by a positive concept which yet is opposed to the positive concept with which we start, and which we place in negative relation to it. We can negate pleasure by pain,—green by red,—and so on. This is real as compared with formal negation. Now, which is used by the Hegelian dialectic? Obviously not the former,—not the purely logical negation; and therefore the prog-

ress of the dialectic is not of pure thought at all in even a subordinate sense of that term. Absolute logical negation leaves nothing in its place. The Something — the *Etwas*, — being negated, leaves no positive in the shape of Other. It leaves merely the ideal concept NOT ANYTHING — or nothing, if you chose. The something is thus a positive against a mere negation; but by a trick of language it is sought to contrast this IS or SOMETHING, with an OTHER or positive being. This is unwarrantable. OTHER or ANOTHER is not the proper negative of Something or Somewhat; this negative is NONE, or NOT-ANY. This is mere negation, not position at all. That the opposite of Somewhat is more than a mere negation is simply an assumption of the point at issue. "Limit in so far as negation of something is not abstract non-being in general, but a non-being which is, or that which we call OTHER." The questions for the dialectic here are the possibility of movement from Some to Other, and the nature of the Other as compared with the Some or Something. This passage is operated wholly by negation, — by the negation of the immanent, ever pressing on movement of the conditioning thought or concept passing into negation. And every determination is negation. But the IS-NOT is no development of IS; there is no motion or progress from the one to the other; there is simple paralysis of all motion; and there is as little possibility of any medium either between or above them. As David Hume pointed out, this is the true or absolute contradiction. The dialectic at the earliest stage, and especially later in the case of Quality, assumes what it ought to prove, — nay, what is unprovable, — that the negation of a positive is always and necessarily itself a positive. Thought is thus baptized synthetic: and this is deemed a sufficient basis for the construction of the universe.

But let us take the other form of negation, — that of mere opposition or contrariety. This we know well. Here we negate one affirmative concept by another affirmative concept. We negate the Somewhat by Some Other. We negate red by green, — black by white, — square by round, — and so on. Now we have got beyond the formalism of the something and the opposite, — the position and the mere negation. We are now dealing with definite concepts of some thing and other thing. But how do we get the some other, or positive, which in this relation we set in opposition to our original positive? Can we get it by pure negation? This has been shown to be impossible. All that negation implies is the relative assertion of non-existence or non-reality. This implies nothing positive. If, therefore, we set positive against positive as in real or contrary opposition, we oppose one concept to the first, which does not flow from that first by negation. In fact, we are now dealing with species under a genus,—with the results of intuition, experience, and classification,—results only possible, in the first instance, through the negative regulation of the logical laws of identity and non-contradiction; and we are setting positive concept against positive concept, of which pure thought knows nothing and can say nothing. We are now really in the sphere of space and time. Here if we negate one member of the constituted class by another equally positive we know both members independently. But we can negate even under contraries when we are ignorant of the precise positive opposite. It is enough if the positive concept be opposed to some one of its possible opposites, for I may quite well say, the thing spoken of is not this particular species under the genus; it is some one of them, yet I do not know which. The sum is either 10, or 12, or 15, or 20. I know it is not lower than the first, nor higher than the last; which I cannot say. A definite opposite goes quite beyond pure negation; it is a simple matter of experience, and experience alone. So that, strictly considered, even real or contrary opposition does not of itself imply a definite contrary concept; the negation of a positive concept, when already subsumed under a class, implies only the possibility of its being found in some concept or other under the sphere of that class.

From this we may gather the following as the rules of determination:—

a. Determination is the condition of negation; there is no actual negation unless in relation to actual determination. Negation, therefore, as a moment of progress or movement, cannot follow the purely indeterminate. The formula IS and IS-NOT, here, is but a terminal abstract, and indicates only the possible or hypothetical application of the relation to content not yet supplied. The so-called movement on the principle of negation of Pure Being into Pure Nothing is meaningless.

b. A determination does not imply a greater negation than is requisite to preserve its reality as an affirmation. This applies both to contradictories and to contraries — *e. g.*, Contradictory, as ONE and NONE; contrary, as veracity and untruthfulness, or the ideal exclusion of the violation of the law of truth-speaking. This obviously holds in relation to contraries, where there is a limitation to certain possible members of a class. Hence it is erroneous to maintain that every (indeed any) negation is necessarily as positive as the affirmation or determination.

7. The doctrine thus maintained by Hegel, under the category of quality, that every determinate being or object of thought leads directly to that which is the other, or negation of itself, is erroneous. But it is not less a mistake to maintain that every determinate object of experience is what it is, only because it is not something else. This doctrine is not correct because a determinate object of space and time — say hardness or resistance — is not what it is mainly or only because it is not its opposite, contradictory or contrary. On the contrary, the opposite, whether contradictory or contrary, is merely a limitative concept in respect of its positive reality, and lies necessarily in a different sphere, or one negatively related to it. The reality of the object does not depend on its not being in the other sphere; but the existence of this sphere is relative to the previously determinate character of the object. This determinate character it has obtained as the definite effect of a definite cause. Otherwise, we should have the absurdity that the whole contents of space and time could be determined, not by science or inductive research, but by the negation successively of determinate objects; and as in the case of real opposition, this negation might be many and various, we might have the most conflicting results vaunted as equally the results of necessary deduction. Nay, in every case the determinate would be explained by what is the very opposite of its nature, as resistance by non-resistance, and sentiency by insentiency. The fallacy here consists in assuming that mutually exclusive concepts are, as correlative, identical,

whereas they are simply limitative. This fallacy pervades nearly the whole logic of Hegel. It comes out transparently in his doctrine of Essence, and in the deduction of Difference from Identity.

It is, further, assumed in this doctrine that a concept, as possessed of definite qualities, is not an object even of thought or meaning, unless in so far as the concept of the negation of those qualities gives them reality in thought; whereas the reverse is true,—the negative conception is conditioned by the positive, and has itself no meaning unless in relation to that positive. The negation subsists through the positive; not the positive through it. In the case particularly of contrary opposition, while the positive concept is one and definite, there may be many negations of it,—*e. g.*, green may be equally negated by red, black, or blue. But its reality as a concept does not depend on our knowledge of which of these is its counterposed negative.

8. Closely connected with this is another sense of the principle *Omnis determinatio est negatio.* And it is this sense in which it is brought especially to bear on the first principle of Descartes. It is assumed as the character of determination itself that it is a negation,—a negation of something or some concept preceding it, really or logically. This meaning of the principle seems to be common alike to Spinoza and Hegel; and it is necessary to enable them to force on Descartes the meaning which it is averred his system truly bears—viz, that the real is not to be found in the determinate of our experience, but in that higher sphere of which it is simply a negation. Spinoza illustrates the principle by reference to Body. But the results can hardly be said to justify us in carrying it further. To know matter as it really is, we must abstract from any limit which it possesses. It is figured, for example; but Spinoza tells us that this is a mere negation. It must therefore be got rid of. Matter viewed infinitely or indefinitely can have no limit; limit belongs only to finite or determinate bodies—that is, they are defective in possessing limit at all. They are not truly matter. Matter is the non-figured. The fallacy here is not far to seek. Matter in space is seen by me only as it exists, a colored and extended surface, limited by coadjacent

color and extension. Difference of color is necessary to our apprehension of figure in material bodies, and of difference of figures. If I could suppose that there is no color in bodies, there would of course be no difference of color, so therefore no difference of figure. But with the absence of figure, would matter remain matter to our vision? or with the entire absence of extended limit, or limit to touch, would matter remain matter to touch? Does the taking away of the limit or amount of extension which a body possesses, leave or render that body indefinite or infinite in extension? Does the taking away this limit in succession from all the bodies of my experience leave or render these indefinitely or infinitely extended? There cannot be greater misconception than in supposing this. The true residuum in such a case is not body infinitely extended, it is simply the non-extended; for with the extinction of the limit to the extension of the body — say a red line with beginning and end — there is extinction absolutely of the extension which I perceive or can know in the circumstances; that is, there is the extinction in every case of the given body altogether. The residuum is a mere blank indeterminate for thought.

But take this principle generally. Let us see its issue. We have to abstract from the limits of the finite, and the residuum is the real — the infinite. It is indeed the only reality; the finite is only apparent or illusory. Now, what is the residuum on such a process? The mere vague indeterminate of thought, and nothing more or else — the so-called substance, in fact, of Spinoza. Let the finite thing be my self-consciousness. I am conscious of an act of volition, at a given time. To know the reality, I have to abstract from the limits of this act. Volition is a limit; so is self, and so equally is consciousness; so also is my being at a given time: all these must be discarded, and what remains? No object of thought whatever. There is, if you choose, the vague possibility of thought. Because I cannot actually deprive myself of consciousness, but must always be supposed conscious of some process of thought even in abstracting from the limits of thought itself, this vague possibility of determination remains to me. But nothing actually is as an object of thought; for if all limits be supposed taken away, nothing can be predicated. I cannot now even say that the residuum IS, for that would be a limit. I have now reached an absolutely vague form of the suspense of thought and knowledge itself. This may be called the infinite — it is simply the absence of thought and predication. It may be called reality, and the only reality — it would be better to call it nonsense.

9. To the Hegelian the substance of Spinoza is a pure indeterminate. The negation of the finite or of finite determination is held to be allowable and just, and with it the abolition of the distinctive character of the mind and body of our experience. But Spinoza's defect is, that he does not reach a proper first or whole. With him it is the absence of quality rather than the presence of Spirit. It is pure affirmation without negation; whereas it should be affirmation that necessarily negates itself by affirming the finite. It is a simple indeterminate or absence of determination; it ought to be that which is self-determining, the living individual whole or spirit, which manifests itself in all that is. But I maintain that this absolutely indeterminate is the true and logical residuum of the abstraction from all limit. This process will not yield a positive in any form. Finite self and consciousness being abstracted from, there can remain no infinite self and consciousness. For we are not here saying that the degree of the quality is increased, — as when we say that there is intelligence higher than our intelligence; but we are seeking to throw off limit and quality altogether. The very limit is a negation, — a negation of the unlimited. The void indeterminate cannot be filled up by the Infinite Spirit. Nor can we properly be said to have reached the knowledge of a whole which includes our self-consciousness as a part — whatever that may mean. This were simply to take up the discarded limits, the definite predicates of self and consciousness — and baptize them infinite self and consciousness. The abstraction must be done in good faith. Self, without or apart from limit, is to me no-self; and consciousness, unless as a definite consciousness, as a conscious act at a given time, is no consciousness. Self and consciousness may indeed be regarded as logical concepts. SELF and CONSCIOUSNESS are capable of being thought by me as notions or as names for classes of

things. But as such they have their limits or attributes; they are what they are, though determination and attribution, like other notions; and they are realizable by me only in connection with individual instances of them. This is a totally different position from the abstraction from their limits; in fact, it is impossible under such an abstraction. The residuum, accordingly, of this abstraction is not an infinite self or self-consciousness; it is simply a vague indeterminate, which is neither thought nor being, and which is possible at all or conceivable only because while abstracting from all limits I surreptitiously retain the limits of self-consciousness and thought. To call this a whole in which I am included as a part, is to apply an illegitimate analogy. Whole and part imply limitation as much as finite self-consciousness does; and we are not entitled to seek to express the absolute abstraction from all limits by correlation or limitation.

It may, of course, be said that abstraction from the limits of the Ego of consciousness gives us the notion of an Ego in general. The Ego of my consciousness is an individual embodiment of the notion of a universal Ego. By abstracting from limits — that is, considering me as but AN Ego — or one of the Egos, I get to the universal notion — Ego, the Ego. « I » is predicable of me; it is predicable of others, it is predicable of God. But what then becomes of the individuality which is attributed to the infinite Ego, or infinite self-consciousness? How can « I, » the individual, be in any sense a part or manifestation of this infinite Ego, if « I » and « He » are but exemplifications of a common notion?

10. There is a sense, no doubt, in which we must suppose that finite self-consciousness is related to something beyond itself. As a reality in time, it has relations to other points of being in time; and we must go back to a ground of it, either in or above temporal conditions. But the question at present is not whether this be so or not; or whether we can reach a solution of this problem; but whether in the way indicated we do or can connect or identify our finite self-consciousness with what is here called an, or the, Infinite self-consciousness.

The main objection to this view has been anticipated in the criticism of the principle of determination involving negation. If in affirming my self-consciousness, I necessarily and knowingly negate an infinite self-consciousness by imposing a limit upon it, I must be first of all conscious of this infinite self-conscious being. He is necessarily first in the order of my knowledge. Negation means previous, at least conditioning, affirmation. Conscious limitation means a previous consciousness of the absence of limit. I can only consciously impose limit on that which had no limit, by knowing first of all the unlimited.

Now this reduces the whole process to absurdity and self-contradiction. If I know this infinite self-consciousness which I negate in asserting myself, I must know both before I know and before I am. My knowledge no longer begins with me being conscious, but with me being conscious not of, but as, an infinite self-consciousness, and that when as yet I am not distinguished from it as either existent or conscious. Or do I distinguish myself from this infinite self-consciousness when I know it? Then what becomes of its infinity? And how then am I a mere negation of it or a moment of it? Am I identified with the primary consciousness of it? Then what becomes of me and my knowledge? And how can I be said to negate this infinite self-consciousness which I am in order that I may be?

But the truth is, that if every determination is a negation of a previous determination, there never was any determination at all to begin with. Knowledge or determination never could have a beginning; for as any given determination is only a negation of another determination, and dependent on this other, every determination is a negation. But the negation at the same time, needs a determination as a condition of its existence — that is, it needs what, by the very conditions of the problem, is impossible. Such a statement implies not only the non-commencement of knowledge — it implies the very subversion of the conception of knowledge; for it ends in identifying affirmation and negation — *i. e.*, in pure non-determination.

11. But what, it may be asked, is the moral bearing of such a doctrine? In order to get the truly real, the first limit that must disappear here is our own individuality; we are no longer truly one; we are not really distinguished from the infinite substance as individuals;

we have no independent existence or reality. But take away the notion with which we delude ourselves that we have an existence in any way distinct from the substance of all, and a good deal else must go. Good and evil, freedom, responsibility, all these must disappear with our personality. It is because we think ourselves as distinct from the substance which is identified with God, that we are conscious of doing the right or the wrong, have merit or demerit. But we may give up these thoughts altogether; they have no reality; we need not trouble ourselves either about good or evil, pity or repentance, pride or humility. They are all the same in reality. Personality as a limitation is a mere negation, is unreal; the only true reality is the unlimited substance. To it all personality is indifferent; to it also necessarily is all good and evil; these are mere temporary limitations of its development. Regarded from the finite point of view, good and evil are delusively distinguished; but these seeming differences disappear the moment they are contemplated from the point of view of the infinite substance. All that is, is alike to it; all is equally what it is; there is really ultimately no difference of right or wrong in the one — that is, in the universe.

As for the abolition of the temporal distinction of good and evil, and their identification in the absolute one or substance, all that need be said is, that whatever be the ultimate solution of the mystery of good and evil—whether absorption or sublimation, or elevation of moral will in the universe — this Spinozistic solution is obviously none. It is the mere audacity of reckless assertion to say that there is neither good nor evil in time — that neither temporally is real; it is a misconception, moreover, to suppose that abstraction of the differences between good and evil really identifies them; the result is not identification, but the destruction of each in thought; for the difference being abstracted, neither remains to be identified with the other. And that they are the same in or to the eternal substance, is only vindicable on the supposition that this substance is neither intelligent nor moral, but a name for the suspension of both functions.

II. But it may be worth while, in closing this section, to look for a moment at the correction and supplement of Spinoza, as put by Hegel himself. « Germany, » as Trendelenburg tells us, « knows the formula by heart that Hegel's great merit is that he defines God as a subject, in contradistinction to Spinozism, which defines him as a substance. » « Substance, » says Hegel, « is the principle of the philosophy of Spinoza. But this principle is incomplete. Substance is doubtless an essential moment of the development of the idea; but it is nevertheless not the idea itself; it is the idea under the limited form of necessity. God is without doubt necessity or the absolute thing, but he is also a person, and to this Spinoza has not risen. Spinoza was a Jew, and he placed himself at the oriental point of view, according to which all that which is finite only appears as transitory and passing. The defect of his system is the absence of the Western principle of individuality which first appeared in a philosophical form, contemporaneously with Spinoza, in the monadology of Leibnitz. »

The points of the deduction are these:—

1. The tie which connects things, which causes a thing to enter into actuality as soon as its conditions are fulfilled, is Necessity.

2. This Necessity, considered in itself, is Substance — the point of view of Spinoza.

3. But substance, as absolute power, is determined in relation to Accident. It thus operates — becomes Causality.

4. Substance is thus cause, inasmuch as, passing into accident, it is reflected upon itself, and thus becomes the original thing (*ursprüngliche Sache* — *i.e.*, thing presupposed in the effect).

5. The effect is distinguished from the cause; but this distinction, as immediate or posited, is to be abolished. Because the cause operates, there is another substance — the effect — upon which the action happens. This, as substance, acts in opposition, or reacts on the first substance. There is action and reaction. Causality passes into the relation of Reciprocity of action.

6. The self-dependence of the substance thus issues in several self-dependents, and thus the generated, like the generating, is substance; and because causes and effects act and react, these are self-balancing. Effects are causes. The substance thus remains in this change-relation iden-

tical with itself. And herein lies the truth,—the conciliation of Necessity and Freedom.

In other words, substance regarded simply in relation to its attributes or accidents is a necessary or fatal relation; regarded as cause operating effect, it is free or attains to freedom, because what it produces necessarily is from itself and identical with itself, is itself cause, and thus remains « with itself.» Substance in relation to accidents is out of itself, or in relation to what is out of itself; but substance as cause in relation to its effect is as thus cause identical with itself, and yet combines self-identity with development.

There is hardly a statement in this series, or a link of connection, which might not be properly challenged. What does the whole amount to but an identification of the relation of substance and accident with that of cause and effect? But apart from this, what is the identity introduced? Simply the identity or rather proportional energy of substance as cause with effect as determined result. Is this identity of substantial cause with itself? Will any one maintain that this is so in relation to physical transmutation, or in relation to mental manifestation? Is it so in any act of volition? Then what is the sense, if there is any coherent meaning at all, in the position that accident or effect is cause in respect of the substance or cause by which it is produced? Does the reflection or so-called reaction of an effect on its cause constitute it a cause in respect of its own cause? Substances may generate other substances, and causes other causes; but these are so not in respect of their own substances or causes, but in respect of the accidents or effects which in their turn follow from them. This is simply a specimen of the common Hegelian fallacy that correlatives, as mutually reflecting upon or implying each other, are identical. This, though really the vital point of the whole Logic, referring as it does to the development of Spirit, is about the worst and weakest specimen of so-called deduction in the system.

This process is brought forward as the true generative or creative process of the universe of God and Man. The theory has advanced on Spinoza; it has introduced negation, superseded his pure affirmation, and solved the problems of the infinite and finite,—of Liberty and

Necessity. Substance has now become subject or spirit; it is on the eve of passing into, or rather has in it the power of, the Concept (*Begriff*), which posits in itself differences which return to unity with itself.

The process, moreover, is not only the way in which we may best think of God, but it is God — God passing before us in the creation of himself and the universe. He is thus far on his way to his true being, in the complete realization of the process, in which, starting from the primeval nothing, he creates himself and the universe by a series of NOTS by which he is sustained and enriched.

He is Substance developed into Cause, and thus into Concept and so regarded as conscious subject or spirit. He operates, and in the operation remains identical with himself. But how is either consciousness, freedom, or purpose provided for here? Substance is under a necessity of passing into cause, and cause again into effect, which is counter-cause. What is there here beyond fatal evolution? If substance merely produces substance and cause cause, what provision is there here for consciousness or purpose? Have we yet come to subject or spirit? Have we yet come to, or made the least approach to, a unity of self-consciousness which is identical with itself, or have we the slightest provision for conscious end or purpose in the development? What sort of freedom, moreover, is that which is compatible with fatal emanation, provided only the spring or source of that emanation be either substance or cause itself, and the process of emanation necessary? Is this the highest kind of freedom, or the freedom which we are to attribute to Deity? It is infinitely short of the notion of freedom in our own experience. « In necessary emanation all is virtually predetermined, and freedom, though proclaimed the essence of spirit, is necessity for the individual.» It is the freedom of which the material mass would be conscious, if it were conscious at all, when let loose from the tie which bound it to the height it descended to the earth. Or, as Trendelenburg has well put it: « Freedom, a grand word, has thus in this relation no other content than this comfort of the substance, that the upspringing are still substances, and the effects as working against are again causes. This relation is the most abstract reflection everywhere applicable, where anything moves. Who ever called it Freedom? Then were necessity even freedom, if the master strikes the slave; for therein are they identical that both are substances; and the slave who gives up his back is operating in this opposite action, as the master in the first cause.»

XII. Hegelian Criticism — The Ego and the Infinite.

The attempt to Hegelianize Descartes seeks to correct him in what he said, and to bring out what he meant to say, or at least ought to have said. It refers, of course, particularly in the first instance, to his *Cogito ergo sum.* That has to get a new meaning, or at least aspect, before it can be accepted as final or sufficient. Let us see how the thing is to be managed. The scope, sense, and guarantee of the first principle have already been explained. What is the Hegelian view?

We are told, in Hegelian language, that the *Cogito ergo sum* is not a sufficiently deep or primary basis of philosophy. A mere certainty is not enough. The certainty must be primary, nothing actually, but all things potentially. The certainty which it gives does not lie at the root of things. It implies a dualism of thought and being; we must therefore go beyond it to something more fundamental. Philosophy «must penetrate to a stage where thought and being are one — to the absolute unity of both, which precedes their disruption into the several worlds of Nature and Mind. It must show us the very beginning of thought, before it has come to the full consciousness of itself.»

Now whence is this MUST, this necessity of penetration to an absolute unity, whatever that may mean? How is that, when we are supposed to be seeking a beginning of philosophy, we are able dogmatically to lay down its prerequisites in this fashion? Have we already a philosophy of what a philosophy ought to be? In that case, how can we be supposed to be seeking the beginning of any philosophy? Surely it is more in accordance with all rules of sound scientific and philosophical procedure to see whether we can go backward or upward to this unity, after we have studied the facts and the conceptions which they involve, than to assume that there must be such an absolute unity for philosophy; and further, that we must be able to know it, and to demonstrate all forms of reality from it as a common basis. What is this but to assume, at the outset, a particular solution of the great problem of philosophy, while a more modest and circumspect method would expect such a solution, whatever its nature might be only at the end, and after careful inquiry?

1. One is anxious to know precisely the points of the proof for this Hegelian representation of the imperfection of Descartes' doctrine and the necessity of its own. There seem to be two main grounds of proof. These are two statements or principles, which are given in a somewhat dogmatic fashion, as apparently self-evident. For it is a characteristic of this pre-suppositionless philosophy that it more than any other makes assumptions without proffering either proof or warrant of them. The one alleged principle is that, «to be conscious of a limit is to transcend it.» Or, more particularly, we are to identify «the consciousness of self as thinking with transcending the limits of its own particular being, and so with the consciousness or idea of God.» «Self-consciousness has a negative element in it,—that is, something definite, and therefore limited.» This is a statement of the principle, and also a hint of its immediate application. The other principle is the well-known Spinozistic aphorism that determination is negation,—*Omnis determinatio est negatio.*

The two principles now mentioned very closely coincide. The negation refers to the qualities of individual objects; the abstractions from limits refers to things as in space and time, or to things as bounded. As quality is itself a determination, it is a limit. In order to get at what is truly real, we have to abstract from the actual limits of individuals,—nay, we have ultimately to abstract from all limit whatever and we shall find the only true reality in what is then called the Infinite. Hegel is credited with bringing out explicitly the principles which governed the thought of Spinzoa.

2. The so-called principle *Omnis determinatio est negatio* has already been sufficiently exposed. Let us look now at the other generality which is vaunted as a principle, and, the ground of advanced philosophy. It is thus Hegel himself states the principle:—

"The knowledge which we have of a limit, shows that we already overleap the limit; it shows our infinity. The things of nature are finite by this even, that limit does not exist for them, but only for us who compare them with each other. We are finite when we receive a contrary into consciousness. But we overleap this limit in the knowledge even which we have of that contrary (other). It is only the unconscious being (*der Unwissende*) that is finite, for it is ignorant of its limit. On the other hand, every being which knows limit knows the limit as not a limit of its knowledge, but as an element of which it has consciousness, as an element that belongs to the sphere of its knowledge. It is only the being unknown (or of which there is no consciousness) that could constitute a limit of knowledge; while that known limit is by no means a limit of knowing. Consequently, to know one's own limit is to know one's own illimitability. Meanwhile, when we conceive spirit as unlimited, as truly infinite, we ought not to conclude that the limit is in no way in the spirit, but rather to recognize that spirit ought to determine itself, and therefore to limit itself and place itself in the sphere of the finite. Only the understanding is deceived when it considers this finitude as insurmountable, and the difference of limit and infinity as absolutely irreconcilable, and when, conformably to this conception, it pretends that spirit is finite or infinite. Finitude, seized in its reality is, as we have just said, in infinity. The limit is in the unlimited; and consequently spirit is not infinite or finite, but as well the one as the other. The spirit remains infinite in its finitude, for it suppresses its finitude. In it nothing has an existence fixed and isolated, but all is found idealized, all passes and is absorbed in its unity. It is thus that God, because he is Spirit, must determine himself, posit in him finitude (otherwise he would be only a void and dead abstraction); but as the reality which he gives himself in determining himself is a reality which is completely adequate to him, God, in determining himself, becomes in no way a finite Being. Limit is not then in God and in the Spirit, but it is placed (posited) by the Spirit in order that it may be suppressed. It is only as moment that finitude can appear in the Spirit and remain there; for by its ideal nature the Spirit raises itself above it, and knows that limit is in no way a limit insuperable for it. This is why it overpasses it, and frees itself from it. And this deliverance is not as the understanding represents it, a deliverance that is never accomplished, an indefinite effort toward the infinite, but a deliverance in which the spirit frees itself from this indefinite progress, completely effaces its limit or its contrary, and raises itself to its absolute individuality and its true infinity.»

Again; «To be annulled by and in its contrary there is the dialectic which makes the finitude of preceding spheres. But it is the Spirit, the notion, the eternal in itself which effaces this image (simulacrum) of existence, in order to accomplish within itself the annihilation of the appearance.»

We find the principle of this passage repeated in Hegelian literature as apparently not requiring proof. We are told that «to know a limit as such is to be in some sense beyond it;» «the consciousness of a limit implies the consciousness of something beyond it;» and as applied to reality, it is said to follow that «the dualism of mind and matter is not absolute, and thought transcends the distinction while it recognizes it.» We find it asserted that «if the individual is to find in his self-consciousness the principle of all knowledge, there must be something in it which transcends the distinction of self and not-self, which carries him beyond the limit of his own individuality.» Subjective consciousness passes into objective in the consciousness of God. «It is because we find God in our own minds that we find anything else.» Finally, the result of the doctrine of the transcending of limit is that «our consciousness of God is but a part of God's consciousness of himself, our consciousness of self and other things is but God's consciousness of them, and there is no existence either of ourselves or other beings except in this consciousness.»

3. As applied to the Cartesian position, the correction it yields may be summed up as follows:—

The being conscious, or the finite, is an illusion or pure negation, if me-being or me-conscious is viewed as a being or reality in itself, and having an existence distinct from, or even in opposition to, a non-self in the form either of God or Matter—extension. I conscious do not exist apart from my being consciously God himself — an infinite self-consciousness — or at least a part of him, or an individual included under him as a part of his consciousness in which I partake. It does not seem to be affirmed that I, the individual conscious Being, am really God, in the sense of being convertible absolutely with his Being or consciousness. He passes in me and over me, if he does not trample me out. I am affirmed, however, to be a part or a moment in his consciousness, whatever that may mean; so that I cannot be conscious of myself without being conscious that, so far as I am conscious, I am God, or his consciousness is my consciousness, or my consciousness is his; only my being conscious does not exhaust his consciousness. The moment, however, that I conceit myself as anything but an indissoluble part of the consciousness of God, I deceive myself, raise illusion to the rank of reality. The only reality is the Infinite; and I am in his development. That is all I can lay claim to. This is true also of all the individual consciousnesses of the universe; they are not really individual consciousness in the sense of being consciousnesses separate from the Divine consciousness; they are simply moments in his consciousness: his consciousness is theirs, and theirs is his. The Divine wave of consciousness flows through all humanity — indeed through all the universe; for the different ascending stages of being are but moments in the Divine consciousness as it moves upward and onward from its dim unconscious potentiality to self-consciousness in man, and to the transcending of things in the absolute Spirit, which, in knowing itself to be all, is all.

Several questions thus at once arise. The first of these is the historical one as to whether it is the doctrine of Descartes. This comes very much to inquiring as to whether his statements, collateral with his main principle, give reasonable hints of it.

I. There can, I think, be little doubt that this identification of finite self-consciousness and an infinite self-consciousness, or consciousness of Deity, is a totally different conception from that of Descartes. He no doubt holds, that alongside the finite self-consciousness there is an idea of the Infinite — an idea which is positive, which possesses more reality than the idea of the finite. This idea is suggested to us, or it arises into actual consciousness, through the conception of our own finitude, limitation, or imperfection. It is, in fact, the correlate of the intuition of self and its limitations; but it is not, in Descartes' view, an intuition of being, as our self-consciousness is; it is not, properly speaking, a consciousness of being at all; it is not, as it has been improperly regarded, the consciousness of God on the same level with the consciousness of self — it is simply an objective or representative idea in the consciousness of the finite being. The idea and the reality of God are so far from being identical, that the principle of Casuality is called in by Descartes to infer the Being from the Idea. There is no identification here of the finite self-consciousness as an intuition with the idea even, far less with that which is totally separate from the idea — the Being or consciousness of Deity. We could not properly, on the Cartesian doctrine, even speak of the consciousness of God, as we can of the consciousness of ourself; for, in the latter case, we are the reality — in the former we are not even face to face with it.

1. But Descartes makes a further statement on this point. He tells us that the idea of the Infinite is not only positive, but «in some sense prior» to the consciousness of the finite — to my self-consciousness. This, of course, would be contradictory to his main doctrine, that self-consciousness is the first principle of knowledge, if we did not remember that the priority «in some sense» of which he here speaks, is the priority, not of actual consciousness, but of latency. He is giving, in fact, an instance of his doctrine of Innate Ideas. These, according to him, mean not ideas actually elicited into consciousness, but ideas somehow prior to and conditioning our actual consciousness, while appearing in it. And the idea of the Infinite had, according to Descartes, a special claim to be regarded as innate, because, unlike the ideas of sense, it was not dependent for its actuality on physical conditions. This was not, however, a priority of knowledge, but of potentiality or latency. This statement cannot, therefore, be relevantly adduced as proving actual knowledge before finite or self-conscious knowledge.

2. We fortunately have a perfectly precise explanation of the matter by Descartes himself: «I say,» he tells us in explanation, «that the notion which I have of the

INFINITE is in me before that of the FINITE; for this reason, that from this alone, that I conceive being or THAT WHICH IS, without thinking whether it is finite or infinite, it is INFINITE being which I conceive; but in order that I may be able to conceive a FINITE being, it is necessary that I retrench something from this general notion of being, which consequently ought to precede.»

Two things are clear from this: *a.* That Descartes confused the mere indeterminate of thought, what is as yet not laid down as either infinite or finite, with the true conception of infinity. *b.* That he cannot be cited as having consequently countenanced the doctrine that the finite is a mere negation of the infinite; for the simple reason that he was not speaking of the true infinite, or of what he in other places described as such. The finite might, as a determinate notion, be a step further than the mere state of non-predication; but it cannot be represented as in any proper sense of the term a negation, far less a negation of the infinite. And certainly it is ludicrous to say, in such a case, that the so-called infinite or indeterminate has more reality than the finite or determinate. It is truly void of any attribute or predicate whatever.

3. But if we look at the matter closely, we shall see that there is no true contradiction in the two positions of Descartes, that knowledge begins with the *Cogito ergo sum*, and that in a sense the idea of God is in us prior to the intuition of the *Ego cogitans*. For he quite distinctly regards the knowledge of self and the knowledge of God as of two different orders. In the one case we have an intuition,—the reality is in consciousness, in a sense the reality is the consciousness. The knowing and the known are for the time convertible. In the other case, we are distinct from the reality; we know it only representatively or by idea; the existence of the object is not the idea of it, the idea even is not commensurate with the reality. And whatever be the mode in which we may reach a guarantee of the reality itself, this is not by direct knowledge or intuition of it, as in the case of the *Ego cogitans*. The direct knowledge of the conscious ego is actually the first.

4. It ought to be observed that while Descartes holds the idea of the infinite to be true, real or positive, and to be «clear and distinct,» he does not hold it to be ade-

quate or commensurate with the reality. He holds, in fact, along with these positions, that the infinite is incomprehensible by us. Nothing can be more explicit than his statement on this point:—

«The idea of a being supremely perfect and infinite is in the highest degree true; for although, perhaps, we may imagine that such a being does not exist, we cannot, nevertheless, suppose that his idea represents nothing real, as I have already said of the idea of cold. It is likewise clear and distinct in the highest degree, since, whatever the mind clearly and distinctly conceives as real and true, and as implying any perfection, is contained entire in this idea. And this is true, nevertheless, although I do not comprehend the infinite, and although there may be in God an infinity of things which I cannot comprehend, nor perhaps even compass by thought in any way, for it is of the nature of the infinite that it should not be comprehended by the finite; and it is enough that I rightly understand this, and judge that all which I clearly perceive, and in which I know there is some perfection, and perhaps also an infinity of properties of which I am ignorant, are FORMALLY OR EMINENTLY in God, in order that the idea I have of him may become the most true, clear, and distinct of all the ideas in my mind.»

Our knowledge thus is so far from being identical with the being of God or the Infinite that it is not even adequate to the reality of that being. The being of the Infinite may be a consciousness, but it is not our consciousness, nor is ours related to it as the part to the whole, or in any way necessary to it. God is to Descartes «a substance infinite, eternal, immutable, independent, all-knowing, all-powerful, by which I myself, and every other thing that exists, if any such there be, were created.» But our knowledge of him is not adequate to his actual infinity or reality; it is, in fact, but an analogical knowledge, which does not contain all that he is or may be, and which can at the best grasp his perfections not formally but EMINENTLY.

So far, then, as the doctrine of Descartes itself is concerned, there is no proof that he in any way identified the finite and infinite consciousness. At the very time that he says there is greater reality in the idea of the Infinite than in that of the Finite, and that the former is in some sense prior to the latter, he distinctly infers an actual Infinite, who is the cause of the Idea in the finite, and thus makes as complete a dualism as if he had laid down the material non-ego as an object of direct perception. The true dualism of Descartes is that between the finite and infinite, the imperfect and the perfect; and this is as repugnant to Hegelianism as a dualism between thought and extension.

II. But the question arises — Can such a doctrine as this be made self-consistent? Is it coherent, or even intelligible?

1. Being is consciousness — these are convertible. My consciousness is, and it is not. It is not while I think it as mine; but when I conceive it as also the consciousness, infinite consciousness, of God, it is. The infinite consciousness or consciousness of God is, and it is not. It is not apart from my consciousness; it is when I am conscious. Infinite consciousness and finite consciousness thus exist only as they exist in each other. They are not co-factors — for neither is real by itself; but each is real in relation to the other. In fact, reality is in neither of the co-factors; each taken by itself is an illusion; but let the infinite go out into the finite, or let the finite rise to the infinite, and both become real. There is just one slight difficulty about this doctrine, and it is this — that it gives up too much, and can get too little for its requirements. If the infinite consciousness is by itself an illusion, and the finite consciousness is by itself an illusion — a mere non-entity — how does the illusory infinite consciousness pass into or add on to itself the finite? and how does the illusory finite consciousness rise to the infinite? We must either suppose that the co-factors — the infinite and finite consciousness — had each an independent existence before they became one, — in which case their reality does not lie in their unity; or we must suppose that what was simply unreal and illusory had the power of becoming what is both real and true: or we must hold that there was something beyond them which constrained them to unite, or rather created them in union — in which case, however, there was being beyond consciousness.

2. Infinite self-consciousness is not (does not conceive itself to be), unless it is (or conceives itself to be) finite

self-consciousness; finite self-consciousness is not, unless it is (or conceives itself to be) infinite self-consciousness. In bare formula, A is not, unless it is not-A (or B); not-A (or B) is not, unless it is A. Strictly taken, neither the one nor the other is; only if either is, the other is: if one is conceived, the other is conceived. Neither is by itself; both are, if they are at all. Up to this point, no statement is made except that of a hypothetically necessary relationship. Exception even might be taken to the validity of the alleged necessary relation. But waiving this meanwhile, the question now is—Can this hypothetical relationship be realized or fulfilled? Do the terms of it not preclude the possibility of its absolute assertion? I hold that they do, and that the problem as put is *ab initio* null. We have merely a hypothetical see-saw. The one term—viz, finite self-consciousness—is not, unless it is the other term, infinite self-consciousness. There is, therefore, no starting-point for determination. If the one is not, until or unless it is the other, I can never say that either the one or the other is, or that they both are. If I had before me two exclusive alternatives, or even correlates, equally coexistent, I could absolutely say, This is, therefore the other is not; or, This is, therefore that is also. If it had been said infinite self-consciousness and finite self-consciousness are necessary correlatives, I could have concluded that, when I got the one I had the other. But if I say, as this formula does, the one is not unless it is the other, I can determine nothing. For my finite self-consciousness is not, until that infinite self-consciousness which is said to be inseparably it, is also; and so the infinite self-consciousness is not, until my finite self-consciousness which is inseparably it, is also. I must, therefore, always beg the very thing which I am called upon absolutely to establish, before I can assert or infer it. I shut myself up in an absolute *petitio principii.*

I do not exist only in the consciousness of God; and God does not exist only in my consciousness, and in the consciousness of other minds. I have not merely a universal existence; and God has not merely a distributive existence. At least these are propositions I am never able to affirm, for the reason that I can never *ex hypothesi*, even be until I am not myself, but God; and God can never be until he is not himself, but me. Or I can never be conscious until I am conscious as God; and God can never be conscious until he is conscious as me. I therefore can never know God's consciousness; and he can never know mine. As consciousness and being are identical, for the same reason neither God nor I can ever be.

3. But what precisely is the extent of the statement that my consciousness is God's consciousness, and God's consciousness is mine? Is this the human consciousness in all its modes or moods, thoughts, feelings, desires, volitions — in all their limitations and imperfections — in all their purity and impurity, their foulness and their fairness? Is this God's consciousness, at least temporally? Is it his consciousness passing through man? Then what sort of Divine consciousness is this? What of injustice, falsehood, and slander? Is this the Divine consciousness in man? At any rate, we need not deal much with its ethical results. These are tolerably apparent. Had we not better take refuge in Dualism? Or is it only that my consciousness is God's consciousness in the sense of logical or generic identity? — in the sense, that is, of the two consciousnesses being the same in essential character and feature? So that we know at least, as Ferrier put it, what God is, if we do not know that he is. In this case, we have no real identity or identity except in thought. We have the same identity which we have in any classification. But this implies a duality of perception or intuition. And we have not yet reduced all consciousness — *i. e.*, all being — to one.

4. Although Hegelianism seeks to make the principle of non-contradiction of very little effect in its system of doctrine, we are at least, in the first instance, entitled to try any doctrine it advances by this principle. For I presume even Hegelianism, in establishing its own positions by proof, must in the first place assume these positions to be what they are alleged to be, and distinguish them from their contradictory opposites. Self-consistency, accordingly, must be postulated for any series of doctrines which even it may lay down. Otherwise perfectly opposite conclusions might be drawn from the same principle, and thus all reasoning and all consistency of thought be abolished. Now, applying this test merely, we have the me-being conscious, or the individual self-consciousness which we suppose we find by reflection in our

experience pronounced to be ultimately only an illusion. It seems to us to be real. There is self with an attribute or series of attributes, which is distinguished by us from any infinite self-consciousness which we may chance to apprehend or know in any way, as it is distinguished from other individual self-consciousness, which we may find or conceive. If it be only individual or independent in appearance or seeming to itself, how can this seemingly illusory entity afford a process of proof or ground of reason for detecting the true reality, which it, considered as independent, is not? If my consciousness be in the first instance illusory, fortified as it is by the law of non-contradiction, regarding the nature and reality of my own being,—how can it be trustworthy, in the second place, regarding the true or ultimate reality of my own being and of this infinite self-consciousness? Let it be observed, consciousness is the only reality; there are not both consciousness and being in separation. These are one and the same. Well, the only consciousness I as yet know is my own; it asserts itself as such, and it is impossible for me to doubt it. It asserts, as is admitted, its own independent individuality, as opposed alike to the Infinite self-consciousness, to other individual finite self-consciousnesses; but in doing so, it deceives itself. Can it any longer, after that, be accepted as a reasonable trustworthy ground for determining the true reality? Can the illusory consciousness be trusted to rise to the true infinite abiding self-consciousness? Such a deceitful consciousness is obviously too rotten a foundation on which to build either philosophy or theology.

5. But it may be said the Idea here comes to our aid, the idea in the march of "the immanent dialectic." This comes in to correct the ordinary consciousness, which is irreflective and superficial. It seems clear that the consciousness of individuality, of which we here speak, though common, has been dealt with by Descartes and others in neither an irreflective nor a superficial way. It has been tested and analyzed as far back as analysis within the limits of human intelligence will go. It has been found to assert itself under pain of self-annihilation, of the annihilation of thought or consciousness itself. I suspect no other philosophy can give another or at least a deeper guarantee for its first principle. At

least one would like to see it produced. But this immanent dialectic of the idea, wherein does it appear? How does it make itself known or felt? I presume in consciousness, and within my consciousness, within some individual consciousness; otherwise it is not and cannot be anything to me or to any one conscious. But then my consciousness, my individual consciousness, is pronounced and confessed to be illusory. It is deceitful in its very root; in holding itself to be what it most intimately believes itself to be, in what it is absolutely constrained to think itself. How, then, does the immanent dialectic of the idea, as at least in the first instance, and as in knowledge, a form of consciousness, escape the taint of this illusory consciousness in which it appears? How can I trust it when I cannot trust the deliverance of the same consciousness regarding my own individuality? This dialectic may be called necessary, a necessary evolution of the idea, and looked up to as the march of omnipotence. But not less necessary and indisputable is the self-assertion of consciousness, and yet it is but illusion. Why may the necessity of the immanent dialectic not be an illusion of the same consciousness? How, in fact, on such a principle, can we think it to be anything else? If the spring of knowledge be poisoned at its fountain, what can purify its waters? Or if our intelligence be a faulty and illusory prism, how can we expect it to transmit or reflect the pure light of truth?

III. After what has been said of the inherent inconsistency of the theory, it is hardly necessary to inquire whether such a doctrine can be admitted as the necessary and logical supplement of the view of Descartes. But it may be well to examine the alleged ground of its proof. This touches on a question regarding the nature of consciousness, which has important general bearings.

We have, in the passage quoted from Hegel, one statement which is tangible enough to be grasped and examined, and it is the principle of the whole. It seems that the consciousness of a limit overleaps or transcends the limit,—in plain words, that when conscious of a limit, say an opposite, contrary or contradictory, I necessarily transcend that limit, and apparently take it up into myself as a part of me — abolish it by absorption.

The reason of this which is given seems to be that, as an object of consciousness, it is within my knowledge or consciousness; and whatever is so, ceases to be a limit or contrary to me. It is fused with me in the unity of knowledge, and loses its character as an opposite or contrary. I, the conscious thinker, become both myself and the limit which restricts me to myself-being.

1. The first thing to be said about this principle is that, if simply because a limit known is in consciousness, it is necessarily transcended or abolished—then there never can be a limit at all. For it is useless and nonsensical to say that it is only the being of which there is no consciousness, or which is unknown, that could constitute a limit of knowledge. What is unknown is for us undetermined to any alternative, or in respect of any predicate—either as this or that; and so long as it is unknown, could be neither limit nor the reverse to us. If, therefore, limit be to us at all, it must be a conscious limit, or a limit known in consciousness; but how can it even be known as such if, the moment I am conscious of it, it disappears? The very possibility of the existence of limit is first of all taken away by saying that a conscious limit is not a limit at all; and yet it is immediately asserted that there is a limit in consciousness to be taken away.

2. But let us look at this principle in its main application, and we shall see how very vague the statement is, and how thoroughly misleading it frequently is.

Hegel speaks of consciousness; but it is truly the conscious act which must transcend the limit, if it be transcended at all. We cannot deal with consciousness in general, for we know it as a reality only in this or that special act. Now let us look at the main classes of those acts, and test the alleged principle. Let us take Sense—Perception. I apprehend, for example, a certain amount, and therefore limit of space—say, as far as the horizon. I am conscious at the same time that there is space beyond what I actually see. I can imagine space beyond the visible space, and I can go on doing this indefinitely. Here I transcend the limit of vision. But have I in any way abolished the visible limit? In no sense whatever. The bounds within which my vision is exercised remain to me as much bounds as ever,—as definite and unimpassable by vision as before. I cannot see beyond the horizon. All that I have done is, that I have ideally added to the amount of space lying within the limits of vision. In so doing I in no way affect the limit of my original perception. I transcend it in imagination; but I neither abolish it, nor do I absorb it in the consciousness which I have of it, or of the imaginative ideal which I join to it. And what is more, if I place the act of imagination on the same level with the act of vision, because both are in consciousness, I make an assumption which I have not attempted to vindicate, and which is not vindicable. For the act of vision is primary and intuitive, and conversant with an object of a totally different character from the secondary and ideal object of imagination.

3. Let us try the principle by reference to the limit experienced in Desire, a favorite Hegelian illustration. To transcend the limit here, obviously means in thought. When we are conscious of desiring a particular object, we are conscious of the object desired, that we have it not in possession, and we can conceive ourselves as possessing it. That is «transcending» the «limit» implied in the desire. Nobody need dispute this. It is stating the fact of desire and what is essential to it in explicit words. But what then? Is it transcending the limit in any real or positive sense? Does this conception of what I seek put me, the seeker, in possession of the object? In other words, is my consciousness of what I am or have added to by the conception merely of what I want? In that case, to desire must mean that we have the thing desired. The transcending the limit in the sense of being conscious of what the limit is, and reaching the limit in consciousness, are so wholly different things, that only a man inspired with the belief that his consciousness even of a possibility is the only actuality can accept such a conclusion. Nothing could more clearly show that we are here dealing with a new notionalism, related to reality merely as the shadow to the thing.

4. But let us take logical limit. Here, if anywhere, the doctrine ought to hold good, that the consciousness of a limit transcends the limit.

In the constitution of a notion we have limit; limit is essential to the existence of a notion. In one point of view a notion is an attribute or set of attributes named; in another, it is the (ideal) sum of objects in which the attribute or attributes are embodied. Here distinction, difference, therefore limit is essential. The attribute of LIFE, *e. g.*, marks off the thing possessing it from others which do not. ORGANIZATION does the same; and but for the distinction, and therefore limit, implied in the notions, there would be no conception, knowledge, or thought at all. It may be said that because I am conscious of the attribute LIFE, and therefore of its opposite or negative, I have transcended the particular attribute. If to know what a thing is not, is to transcend the knowledge of what it is, I have. This can hardly seriously be regarded as either a novel or important discovery. But this is not all that is meant or implied in the transcending, and we must inquire whether there is abolition of the limit here, or absorption of it in the mere consciousness of it. There is neither such abolition nor absorption. If the limit be abolished by my being conscious of it, there never was a limit to begin with, for there was no limit of which I was not conscious. And if the limit be abolished at all, then the attribute itself is abolished, its very reality as an object of thought is subverted, and there is the blank of knowledge. As to absorption in a third notion which embraces or is identical alike with life and its contradictory opposite — or even contrary opposite — we must wait until this third is produced. It is a mere confusion of thought to suppose that because I know opposites in one and the same act — grasp them in a unity of knowledge — the opposites themselves are necessarily identified or absorbed. Both are in consciousness; and in this way the contrary may be said to be «the other» of the given attribute, but their real difference subsists all the same — subsists in the consciousness itself, on pain of the very abolition of knowledge. Correlation even excludes identity; and the moment correlatives are identified the correlation ceases.

5. Let us look at the principle in its application to the Dualism of Mind and Matter.

Because we are conscious of mind and matter as two realities, we know (are conscious) of something beyond the dualism or limit.

Thought is conscious, and conscious not only of itself, but of extension. It transcends, therefore, the absolute distinction between itself and the other attributes.

What is this transcendent something now known?

a. Is it a unity in which the dualism disappears? Of this, what proof is there? Are we actually conscious of any such unity — conscious as we are of the dualism?

b. Is the something the idea or conception of the possibility of such a unity? How does this destroy the dualism or limit? If we are conscious, or rather think, of such a possibility, must we not always, to make this even intelligible, confront it with the dualism or limit of which we are actually conscious?

In this case, the consciousness of something beyond is a harmless hypothesis, waiting proof of its reality. And the statement of it is simply a confusion of consciousness as intuition, and consciousness as embracing the possibilities of thought. The ideal conception of a limit transcended is not the actual transcending of the limit; and it ought not to be put on the same level with an act of intuitional consciousness. This is to put possibility against fact or reality — the conception of the conditions under which a thing is possible against actual definite thought.

c. But let the object of knowledge gained in this transcendent act be supposed to be actually either the indifference or the identity of the subject and object of consciousness. In either case the relation of contrast or opposition between the two disappears. We have a knowledge above relation and difference, and, therefore, above consciousness. This statement is a simple contradiction in terms. The words knowledge and conciousness cease to apply to these barren formulæ. The absolute identity of subject and object in any form of consciousness we can reach, is no more to us than a square circle. And to rest the assertion of such knowledge or consciousness on the simple statement that consciousness, in apprehending a dualism, transcends itself, is to leave out the only point demanding attention and proof.

6. But the statement may be looked at in its highest generality as referring, not to this or that definite act of consciousness, but to consciousness in general — consciousness regarded as aware of limit in general in

knowledge. It may be said — nay, must be said — logically, consciousness ultimately transcends itself — it passes into something beyond itself. What is the meaning of this? The ultimate limit of consciousness is that which separates it from unconsciousness. When it passes into something beyond itself, does it pass into this opposite — the unconscious? In this case, transcending itself is simply ceasing to be or to know. Our consciousness seems to be under the necessity of a logical suicide.

7. We have a good deal of talk in these days of limit in thought as self-imposed, and therefore superable, such as we not only may but must overpass. In what sense is any limit in thought self-imposed? Is thought, then, complete — *totus*, *teres*, *atque rotundus* — and does it thus impose a limit on itself — a limit, say, of identity and non-contradiction? This is absurd; for if thought already be, it is independent of anything — be it limit or other — which it may impose on itself; it is thought complete. It need not be guilty of anything so foolish and arbitrary as this. But self-imposed limit is really an absurdity. The limit in thought, or of thought, is the limit in or as which thought exists — under which it is possible. We think an object; in doing so, we think it as identical with itself, that is one limit: we think it as contradistinguished from what is not itself, that is another limit; and our thought as thought, as existing or real, is a consciousness of those limits. It does not impose them, for the simple reason that it is not in existence before them, is in and through them, and cannot exist apart from them. The truth is, that consciousness itself is impossible apart from limit — apart from the consciousness of self and not self, the affirmation of this and that. And if consciousness always and necessarily transcends the limit, it always and necessarily transcends its own reality, which, in plain English, means, it ceases to be. But the whole point lies in this, that while each opposite or contradictory is in consciousness, each is an opposite or contradictory still, notwithstanding that they possess the common element of being in consciousness. The fallacy lies in making the common element of consciousness in each convertible with the difference of the opposites of which there is consciousness. There is, in fact, the

usual Hegelian disregard of difference, because of a common element.

8. Those who seem to hold this doctrine talk constantly of the doctrine to which it is opposed as implying that knowledge is represented as limiting, and that all beyond this is the vague unlimited, or unqualified. Now I certainly deny that this is a fair statement of the position. Knowledge is not to be described as merely a limit — that would be to define it by negation. Knowledge, relative, or under limit, is a positive thing, the only positive thing we can have, and it is distinction or distinctiveness which guards it as such for us. It is the content of our knowledge which makes it real for us, not the bare limit. The limit or law enables us to hold the content definitely and distinctively; and if there be no fixity in that, there is simply chaos for us. It is in the content, too, of our knowledge, that its variety lies, and its possibility of increase or development. It is in this, too, that change is possible, transmutation becoming development; but this itself is impossible if every form of consciousness is superable. For what would be the course of human life and human knowledge if this were so? If everything must pass over into its contrary,— if we can never hold anything as fixed or won for thought,— then the aim of thought and life is not to reach the perfection of a type, as we generally imagine, but it is to go on in endless unrest. Mere mutation, whether in an endless line or in the Hegelian circle, is a low aim; it is not true freedom, it is fate, and it is not worth living for. There must be an ultimate type to which life and thought aspire; and such a conception is utterly incompatible with the doctrine that the content and the form of thought are equally unfixed.

9. One would expect cogent proof of such a theory as the foregoing. But really such is far to seek.

Finite self-consciousness, it is said, implies infinite self-consciousness, as finite spaces presuppose infinite space. Is there any true analogy here? Is finite self-consciousness related to any infinite self-consciousness, as the known points of space are to the imagined, whether indefinite and infinite? In the case of space we repeat similars, coexisting similars; we have as clear an idea of space from the smallest portion of it as from the greatest imaginable. It is at its full extent but a repetition of points. Is this the case with regard to the relation between finite self-consciousness and infinite self-consciousness? Is the infinite self-consciousness simply the endless repetition of finite self-consciousnesses? In this case, we should have an infinite series of finites, but this would not make one infinite self-consciousness. We are as far — nay, farther — from unity than when we started. Is the infinite self-consciousness presupposed a self-consciousness which is entirely above limit and predication of any sort, except the general statement that it is a self-consciousness absolutely without limit? This statement is really suicidal, if not positively meaningless. The term SELF cannot be applied under such conditions; and no more can the term consciousness. At any rate, such a self is not the self of consciousness which we know, and has no more logical or other connection with it than it has with non-entity, or the blank of indefiniteness.

10. The infinite self-consciousness and the finite self-consciousness are two phrases which are bandied about as if they were equally grasped by us, and this infinite self-consciousness were as patent to our knowledge as our own self-consciousness is. But the truth is, that while we have a perfectly definite knowledge of our own self-consciousness, personality, and individuality, as a matter of fact or fact in time, we have no such knowledge of an infinite conscious personality. We may be led to infer it from our own consciousness or from other facts of our experience, or we may try to conceive it. This even we shall find an exceedingly difficult task, for a conscious personality above time and limit, yet divided into an infinity of personalities in time — a ME that is every me, and yet itself above every me — is a conception the elements of which are by us positively irreconcilable. At any rate, this we do not find or apprehend, as we do our own self-conscious reality. And to speak of the consciousness of God as on the same level of apprehension and evidence as our own self-consciousness, without even offering explicit proof, is as bad a presupposition as can well be imagined.

We might ask a question as to what an infinite self-consciousness really means. It is an exceedingly ambiguous phrase, a phrase into which it is hardly possible to put a consistent meaning. The only rational analogy through which we can conceive any meaning in it is that of extending our self-consciousness to the universe. We know that we are conscious all through the bodily organism until we meet with a limit to the sphere of our sentiency. This is the true and ultimate distinction between the finite Ego and the material non-Ego. We may carry this analogy with us, and suppose that there is an Ego who is conscious of himself all through the universe of being, as we are conscious all through our sentient bodily organism. But this is as yet to us nothing more than a conception or ideal. We have no warrant, simply because we are self-conscious within a certain sphere or limit, to suppose that there is an all-pervading consciousness which appropriates to itself as its own sphere of sentiency both all finite minds and all matter. Yet what else does an infinite self-consciousness properly mean? And will it be maintained that we have an equal intuition of a being of this character with that of our own individual existence within the sphere of sentiency? Is it not the height of unreason to maintain further that we can make this conception reconcilable with the individuality of finite minds? or that in this case the so-called reality of finite minds can be construed by us as anything but a mere dream? The self-conscious being who conceits himself as real, is merely a thing to which the infinite all-pervading consciousness permits a passing moment of self-illusion.

But what are the terms in which the Infinite or infinite being, is represented? It appears that we conceive of the Infinite Being by the very fact that we conceive of being without thinking whether it be finite or no. We may take this as an explicit statement of what is meant when there is talk of the infinite being. But what truly does this mean? Would any one acquainted with the discussions on this point accept such a statement as a correct description of what we suppose we mean when we speak of the infinite being? To be conscious of being, without thinking whether it be finite or no — this is thinking being infinite. Then, in that case, simply because we reach the indeterminate in thought — neither finite nor the reverse, we have got the infinite! We do not predicate of the notion being, therefore our notion of it is infinite! The cessation of predication is the infinite! Well, such an infinite is not worth the paper it is written on. But is this consistent with other statements that the infinite is an infinite self-consciousness — that it is spirit, and so on? Certainly not. This so-called infinite is the mere vague indeterminate of thought. It is worse as a terminal description of the infinite than even the indefinite of Mill. The true infinite, if there be a positive infinite at all, in knowledge, is that of being in one or other of its forms — that is, intelligible being raised to such a height of conception that we are able on grounds of evidence to say that it is an entity absolutely without bounds. This abstinence from thinking the object as either finite or not, is not a conception or statement, even in terms, of infinity or the infinite; it is a mere indeterminate possibility of thought.

IV. But let us look for a moment at the bearings of this doctrine on Finite Reality, especially the Personality and Individuality of man. What is its fair logical consequence? Is it consistent with the facts of our experience?

1. Individual realities, if the expression be allowable, are the most vain and passing things in the world. They have no true reality; they are, but they are only as passing forms of the outpour of the infinite substance. They are as raindrops to vapor; the partial manifestations of the ultimate reality — again, perhaps, to return to vapor. All that can be said is, that this infinite substance individualizes itself only again to take the individual, perhaps, up into itself, or to let it pass into other individuals; but the idea of anything more than some necessary individualization need not be admitted. The whole sphere, therefore, of human individuality and personality, is swept away, so far as any distinctiveness or permanency is concerned. Each individual is I, Thou, He, at a particular point of time; but these Egos, or Selves, or Personalities have little or no meaning or concern in the Universe. These are simply forms in which the infinite substance must individualize itself. But that is all. Any other ego or self besides ME and THEE and HIM will do equally well, provided simply it is an ego. We pass

away from time, and other egos come in our place — equally emanations of the infinite substance — and thus the evolution or issue of this infinite substance is fulfilled. As to why and how I am here, except that the infinite necessarily evolves itself, I know not and need not care. As to WHERE I am going, and WHETHER I am going anywhere, this is equally left unaccounted for, except that probably I shall return into that infinite or indefinite being — that neutrum of Personality and Impersonality from which I came. It might seem necessary here even to call in the common experience or consciousness of mankind, and to ask whether this is an adequate representation of reality as we find it in experience, or as we find it suggested in experience. A philosophy of this sort does not meet, it shirks essentially the questions of highest and most pressing interest to human life. Some development in things, a development even of a particular sort, and according to particular laws — it being indifferent all the while what are, whence are, and whither go the individualities, the conscious personal existences of the universe — except as accidentally filling up the scheme of things which alone subsists in the Eternal Substance or Reason, this is a system which can satisfy only when faith and hope have fled from the breasts of men, and they are convinced that existence blossoms and comes to highest fruit only in the passing aggregate of human self-consciousnesses.

2. But consciousness by a man of his being merely a relative in the correlation of finite and infinite, really makes him to be — constitutes his being. No man, therefore, who does not attain to this consciousness, ever is. Who among men in the past have attained to this consciousness? Who of the actors, the speakers, even the thinkers, of the world? Who in history have really ever realized this within their own consciousness? I say none — not one — none until Hegel himself, if he did this — in formulating certain phraseology. It follows, therefore, that all men before his time, believing, as they did, in their independent individuality, have really never existed. They were not; they were a mere illusion to themselves. They never rose to the speculative consciousness; they never, therefore, rose to mere being. Their lives are to be set aside as merely side-waters, having nothing to do

with the main stream of life. They cannot even be said to be moments of the eternal being; for they were never conscious of their true relationship to it, and therefore never existed even as moments of it. Hegel could thus quite consistently, yet inhumanly, say that justice and virtue, injustice, violence, and vice, talents and their deeds, passions small and great, guilt and innocence, the grandeur of individual and of national life, the independence and the fortunes of states and individuals, have their meaning in the sphere of conscious reality, but that with these the universal or world-history has no concern. It looks only to the necessary moment of the idea of the world-spirit.

3. To represent the world of human thought, feeling, and volition as in itself a mere negation; to do the same regarding the world of extension, resistance, color, sound, and all the manifold variety of sensible experience; to hold all this as a negation of an infinite something, which has never itself truly come within our consciousness at all, is not to elevate but to degrade our view both of man and the world. These are the most positive objects we know; and if aught else be positive or real, it is because these are positive and real, and we know them to be such. So far from there being an infinite which is the only reality, there can be no infinite which is a reality at all, if these be not in themselves, as we experience them, what our consciousness testifies they are, distinctive existences. Man's spirit, so far, as it is a negation, is a negation of the non-existent and the unconscious; and the world, so far as it is a negation, is a negation of infinite vacuity in time and space. These are the notions negated, if we are to talk of man and the world as negatives. The negation is of the previous absence of being, by the position of being — of consciousness and material reality. The true correlation is between the definite of time and space and the indefinite of both or either. But this is an unequal correlation; it is not the subordination of man and the world to a higher reality; it is not the negation of a higher reality; it is not the evolution of these from it: it is simply the statement of the real as opposed to the unreal, which must be the limit and condition to us of any conception of reality at all.

4. Hegel himself no doubt imagines that he harmonizes the reality of the finite with the infinite, as he thinks that he conciliates realism and idealism. The ordinary view of the reality of God and man is, according to him, this: « God is, and we are also.» «This,» he says, «is a bad synthetic combination. It is the way of the Representation that each side is as substantial as the other. God has worship and is on this side, but so also finite things have being (*Seyn*). Reason, however, cannot allow this equipollence to stand. The philosophical need is therefore to grasp the unity of this difference, so that the difference is not lost, but proceeds eternally out of the substance, without becoming petrified in dualism.» Again: « Phenomenon is a continual manifestation of substance by form. Reality is neither essence or the thing in itself, nor phenomenon; it is neither the ideal world nor the phenomenal world, it is their unity, their identity, the unity of force and its manifestation, essence, and existence.»

The conciliation of infinite and finite thus given is simply to substitute for both a process, an ongoing or outcoming of the infinite, or indeterminate, called at a certain stage substance and spirit. Reality is thus simply movement — movement in the phenomenal world. This phenomenal movement, for there is here really no phenomenal world, is all that is either of the material world or of finite spirit. It is represented as an eternal process of creation and absorption. It is a creation which creates only that it may destroy; a creation which simulates a dualism which never really is at any point of time or space. A dualism which never exists in time is no dualism; a dualism which exists in thought only to be abolished or trampled out by that in which it exists, is a mere passing illusion. This is not a conciliation of realism and idealism; it is the annihilation of everything corresponding to reality, either in the material or the mental world. It is the resolution of both into a shadowy pageantry of a process in which nothing proceeds. There is not the slightest ground for representing dualism as an absolute opposition; and not the slightest approach is made to a conciliation of the finite and infinite by fusing both into a process or relation between terms the distinctive reality of each of which is denied. The pantheism which openly identifies God with the sum of all phenomena may be false; it is not an absolute or inherent violation of the laws of intelligibility.

5. But why speak of the phenomenal or of actual reality at all on such a system? The finite mind is simply in the process; it is the process. In that case to what or whom is there a phenomenal, an apparent? How has it any meaning unless there be a distinct finite intelligence who apprehends it? Again, is it phenomenal to the Infinite Spirit? This, however, is as much in the process, or the process itself, as the finite spirit is. And if it were phenomenal to an infinite spirit, how is the phenomenal to it known to be identical with the phenomenal of experience? The truth is, that the Hegelian reality may perfectly fairly be translated by the serial impressions of Hume, which, having substratum neither in God nor in man, are the merest passing illusion of reality.

6. The fallacy of the whole logic, and the main result of the system, in its bearing on reality, may be summed up in a few sentences: —

« Thought » is used in two diametrically opposite meanings — unconscious and conscious thought; while the former is so far spoken of in terms of the latter. First of all, it is thought without consciousness; and yet it is spoken of as in itself, *i. e.*, it is credited with self-hood, and also with power of movement into what is called its opposite, and then with the power of gathering up itself and its opposite in a third, which is itself enriched. In other words, terms and phrases entirely without meaning, unless as found in conscious thought, are applied to this unconscious thought; it is made, in short, to act as if it were conscious thought.

Secondly, at a later stage of its begged development, it becomes conscious thought, a self-conscious *ego*, which goes through several stages, turnings, and windings, until it becomes a self-consciousness above the finite consciousness and all finite reality: for it is both infinite consciousness and finite consciousness; it is neither the one nor the other, but the fusing of both.

That the unconscious passes into consciousness is assumed, not proved: the way in which it does this is sought to be shown by clothing the unconscious in consciousness or its terms; and thus the disputed fact is established only by a *petitio principii*. The ground of the whole process is a form of vulgar realism which identifies the unconscious with being; and the result of the whole is a nihilism of contradiction in which both positive thought and positive being disappear. The so-called idealism is truly a veiled form of irreflective realism; the so-called concrete or positive result of the system is merely nihilism, or at the utmost phenomenalism.

V. Let us look for a moment at the Theological bearings of the doctrine. It is adduced as a corrective of prevailing views regarding the Divine Reality and Nature. There are some positions regarding Deity which this advanced thought thinks itself competent to interpret in its own way, and to correct. It is said, first, that if the world or the finite material universe be regarded as originating in the free-will of Deity, called arbitrary, its connection with him is to be regarded as «external,» «accidental,» and as having no proper or necessary relationship to him. It is said, secondly, that in order to give a reasonable character to this relationship, the finite world must be regarded as somehow emanating from him by a necessary connection, which stands clear out in the light of reason. This, when fully examined, is found to mean, not only that there is such a necessary connection, but that it is deducible from the very notion of Deity itself, regarded as the Infinite; and further, that this is deducible by us as a process of thought or consciousness.

1. Now, with regard to the first point, it is incorrect and unfair to represent origination or creation by free-will as an arbitrary act. It is to be regarded as an arbitrary act only in the sense in which any act of free resolution is an arbitrary act, this and nothing short of it. And we need not go into the question of free-will to know that will, the highest and best form of resolution conceivable by us, is that regulated by a conception of what is most fitting and best in the circumstances, or, if you choose to employ a vague phrase, by reason. To say that resolution is necessarily arbitrary, is itself a mere arbitrary statement. So far from creation which depends on an act of free-will, regulated by thought,

evidencing only an external or accidental relationship, it is in fact analogous to the very closest, most intimate of all the relationships of our own consciousness. For the closest tie which we know in our inward experience is just that which subsists between ME WILLING and the RESOLUTION which I form. I relate resolution to myself in a way in which I relate no other mode of consciousness, neither feeling, desire, nor thought itself. It is mine in the sense of being truly my own creation; and it is to me the most fitting of all analogies for the mysterious fact of Divine origination itself. The finite as thus related to the Infinite is truly the passage of the Divine power into actuality or realization. It is only a purely verbal logic, founding on verbal assumptions, which can regard it as «external» or «accidental.» If it is to be comprehended at all by us, it must be in some such way as this, and by some such analogy. Will, the expression of personality, both as originating resolutions, and as molding existing material into form, is the nearest approach in thought which we can make to Divine creation.

2. With regard to the second point, the so-called essential or necessary relationship of reason, the first thing to be noted is, that the finite material or mental world, which arises in this way, is and must be the only possible world. If the Infinite is under a necessity of development, he will develop in one definite way, and in no other; and if he has developed in time, that development is the one possible, and no other. Are we prepared to take this consequence? Do the facts of experience warrant it? Does the physical or moral quality of the world warrant it? Can we ascribe to the finite material world which we find in experience more than a purely hypothetical necessity? No one, I think, will venture rationally to do more than this. Mechanical and chemical laws depend ultimately on atomic existence, proportion, combination, and collocation. Organization and life are somehow also connected with those circumstances. But is it not conceivable that those ultimate material constituents of the universe might have been different in various points of constitution and adjustment? Will it be maintained that the actual order which we know has arisen is the only possible order — the single necessary and essential development

of the Infinite Power at the root of things? Further, does not the element of evil in the world imply a contingency which is entirely incompatible with the supposition of a single possible best evolution from an absolutely perfect Infinite? At any rate, can we with our lights prove this to be the absolutely best even in the long-run?

The theology resulting from these principles may be summed up, in these words of Leibnitz, in two propositions—"What does not happen is impossible; what happens is necessary."

3. But let us first take this necessary development of the Infinite or Absolute. Is it speculatively self-consistent? The finite comes from it necessarily—nay, it is, as it originates the finite, material and spiritual. Its reality is, therefore, dependent on its necessary development and relation to the finite: the finite is as necessary to it as it is to the finite. Yet this prior term of a mere relation is an absolute—an infinite, self-sufficient, as such needing nothing but itself for its existence! The term absolute or infinite has no longer the slightest application. The prior term here is a relative—pure and simple, a mere relative, dependent for its meaning—nay, its reality—on a development which it can no more control than the body which gravitates can regulate or reverse its own movement. A god who is only as he must be, producing the contents of space and time—who is only a means to these contents, is about the lowest form of mechanical agency ever set up for man to worship. But further, if an infinite or absolute cause is necessarily at work, must not the effect be an infinite or absolute one? If the cause works necessarily, without let or control, must not its whole power pass into act in the single given operation or moment of action? Then, what have we here? Not a finite result, surely, but a result infinitely or absolutely great, and, therefore, coequal with the infinite or absolute power at work. But what an absurdity does this land us in? Either the absolute perishes in the act of necessary development, and we have a new absolute in its effect—Deity has perished in creation, or we have two absolutes—an absolute cause and an absolute effect—coexisting in the universe. This is an inherent absurdity; and further, what then becomes of our absolute monism?

4. But have we considered the full effect of the statement that the finite is as necessary to the infinite as the latter is to the former? I am quite willing to take the finite here spoken of as the finite in some form — not the actual finite of space and time. Let it be any finite form of being whatever. Deity, in order to be, must produce this actual finite. His reality is dependent on it. What kind of Deity is this? A Deity waiting for his reality on the finite thing which he cannot but produce? The cause dependent for its reality on the effect? We are accustomed to think of Deity as possessing existence in himself — necessary and self-sufficient; and if he have not this, he has no more or other reality than any finite thing which arises in the succession of causalty. But here, forsooth, he waits on necessary production for his reality! Is this conception at all adequate or worthy of God? Is not the self-conscious I, with its free power of will, higher than this? a better and more elevating way of conceiving of God? Is it not a higher perfection than this to be able to say I WILL, or I DO NOT WILL — yet I retain my individuality: I am the center and the possessor of powers which I can use, or not use, as intelligence directs me, and as moral interests require? Is not this a higher grade of being than a something which depends on the necessary production of a given effect for its reality, and which, further, must also depend for the continuance of its being on the continuance of the given effect? For this is the logical result of the doctrine, even granting it the most favorable terms. For unless the effect continues, which is not provided for by the theory, the producing power might quite well be supposed to pass away with its own necessary effort. And this is to be our advanced conception of Deity!

5. But, further, finite being as an evolution of infinite being is certainly variable as to content. We need not again point out the absurdities of the necessary development of infinite being. Is the finite being or development not variable in content at the will — the reasonable or righteous will, it may be — of the Infinite one? Then what becomes of his infinity? Can we conceive a Being as infinite who is restricted to a single development of finite being? But if he is not so restricted, but may evolve several forms of finitude, how can it be

said that the finite as a given form is equally necessary to the infinite, as the infinite is to the finite? If a conscious personality is possessed of free will, how can it be said that a given resolution which he forms is as necessary to his power of free-determination as free-determination with all its possibilities is to it? Such a position can be maintained only on the suicidal basis that a given finite is as necessary to the infinite, as the infinite with all its inherent possibilities is to it.

6. Then, further, there is the point to be established that we have any conception, thought, or notion of the Infinite which is at all adequate or truly distinguishable from what is strictly an analogical notion,—whether, in fact, the Infinite, in any form, is so comprehensible by us as to be the basis of a necessary evolution of thought. For even although it be admitted that finite and infinite are as thoughts correlative, it has yet to be shown that they are of the same nature, positive content or reality. Unless this character can be vindicated to the Infinite as a notion, it cannot be made the basis of a necessary evolution in thought—of the actual finite, or anything with positive attribute.

7. Then this evolution, even if compassable by our thought, is but a process of thought. It would be the ideal mode in which the Divine Power was supposed to work; but it would fall far short of any actual realization of the ideal in time. It is, after all, but a process of reasoning, in which the Infinite is assumed as major notion, and in which, accordingly, we have but a hypothetical conclusion. But we have really no guarantee that the process either represents or is identical with anything in time, or that it is adequate to or convertible with the evolution of that finite world which we know in experience. The mode or ideal of Divine Power, however distinctly conceived, leaves us wholly in the dark as to whether the Power was ever exercised or not. This can only be guaranteed on the assumption that the process of necessary consciousness through which we proceed is identical with Divine action—that, in fact, our thinking, sublimated to the impersonal form of thought, is God's act in Creation. This is but a part of the larger assumption that the real is the rational—or rather, that reality means certain so-called necessary processes in the human

consciousness, call it reason or by what name you choose. This assumption, as unproved as it is unprovable, is contradicted by the fact that the whole concrete world of the sciences of nature and of mind is utterly untouched by it. It is incapable of yielding a single fact or general law of nature or of mind as manifested in consciousness. Hegel's « Philosophy of Nature » and his « Philosophy of Spirit » have been long ago generally given up as utter failures in point of consecutive thinking or fair evolution. They are the mere manipulations of a harlequin logic, which borrows in the premises under one guise of words what it brings out in the conclusion under another.

8. But what, on such a philosophy, is Deity? Or rather, where is the place of Deity at all? If we look at the first stage of the development, he is the most abstract conception possible, the Idea in itself, what may be identified with nothing, yet credited with the power of motion. This first moment is not even real. The Idea becomes real or actual only in the development, in the process. But this, again, is not absolute reality. We find this the highest stage only in the Idea when it becomes absolute Subject or Ego, and contemplates itself as everything that is. In other words, the unconscious abstraction called thought, not at first God, not God even in the process, becomes absolute self-consciousness in the end. He is dependent even for this consciousness, that is, for his reality, on retracing the steps which he has somehow taken into the realm of nature, where he was « out of himself, » and so in the end finding himself in his own supreme conscious identity. This result may be translated into intelligible language by saying that Deity is ultimately the highest point which human consciousness can reach in the way of evolution or development. He is the most which I can think him — nay, he is I when I have in consciousness transcended myself, and identified myself with him. Of course it will be said I, the individual ego of this or that conscious moment, am not God. But then I, the individual ego, am necessary to his existence, as he, the infinite ego, is necessary to mine. His reality lies in the conscious relation which I, the individual, think as connecting me and him. This relation is matter of my thought or consciousness. It is not, unless in the consciousness of some one. Deity.

therefore, at the best or highest, is a process of my consciousness. As I think, God is; and what I think, God is. The step from this to the degradation of Deity to the actual sum or the generic conception of human consciousness is easily, and has been properly, taken. The Hegelian Deity is really man himself—regarded as the subject of a certain conscious relationship.

9. Deity, as standing in necessary relation to man, is dependent on man for his reality; man, as standing in necessary relation to Deity, is dependent on Deity for his reality. The reality in either case is equal: Deity has the reality which man has; man has the reality which Deity possesses. They are two terms of one relation, and they exist only in the relation. If the reality of Deity be interpreted as necessary existence, so must the reality of man; Deity has no advantage in this respect over man. If the reality of man be interpreted as a contingent reality, dependent on the constitution of a relation in consciousness, so must the reality of Deity be construed. Either thus existence, necessary and self-sufficient, applies equally to God and man, or existence, contingent and precarious, applies equally to man and God. In the former case, man is God—he is God developed; in the latter case, God is man—he is man developed. In a word, we have Pantheism on the one hand—we have what may be called Phenomenalism on the other. God sinks to the level of a manifestation of human consciousness, reaching reality only when the speculative reason chances, in the course of things, to develop into his notion.

«A theory,» says Trendelenburg, «that the thinking human mind is what makes the hitherto unconscious god conscious of himself, could have arisen only under the influence of a logical view, according to which comprehensive thought conceives the content from itself, receives no rational ready-made content from without, but produces the determinations of being from itself. It could have arisen only under the influence of a logic, at whose foundation lies the entire presupposition that human thought, when man thinks PURELY, is as creative as divine thought, and in so far is the divine thought itself. Yet we do not, indeed, understand what the conception of God at all means, and what God signifies to man, since it is only man that makes him conscious of himself, and since God, though not like an idol, the work of hands, before which the same hands that made it are folded in adoration, is after all a product of thought, which can hardly be adored and worshiped by the same thought which woke it from its sleep, and enabled it to pass from blind inertness to consciousness.»

10. As to Christ, he is nothing more than any man in whom the speculative consciousness is developed. He can but be God, by being God consciously — as he can be man but by being man conscious of himself as God. This any man can be — for the speculative reason is, if not a universal property, at least a universal possibility; and consequently the incarnation has no special significance. Any man can be God incarnate; every man is God, if only he knew it. The complete abolition here not only of all theological, but of all moral distinctions between man and God need not be emphasized. Strauss and Feuerbach are the true consequent Hegelians.

VI. Hegel no doubt talks frequently of Religion, religious ideas, and Christianity. He professes indeed to comprise them in his system. His system is the essence, the true reality, of which religious and Christian ideas are merely the symbols. He has revealed the reality; all else is mere representation. The truth is, there is not a single term either in Natural Theology or in Christianity which is not perverted by Hegel from its proper sense. The whole burden of his effort is, so far as Christianity is concerned, to convert what is of moral import in Christian ideas into purely metaphysical relations,— and these of the most shadowy and unsubstantial kind.

1. The aspiration after moral union with God is at the root of all true ethical life, as it is of all religious life. This means the harmony of the will of the individual with the divine will. But the Hegelian conception of this relation has nothing moral in it at all. For a moral harmony he substitutes an identity of being or essence,— an identity of the human and the divine consciousness. The dualism implied in a God distinct from man and the world is with him a mere superstition. This metaphysical identity may be a solid doctrine, or it may be repugnant to every principle of reflective thought. It is certainly not a moral union; and it is not Christianity.

It is a doctrine, moreover, incompatible with any proper conception either of Sin, of Righteousness, or of Worship. It is of a piece with the translation of the Atonement into a consciousness of identity with God, and the consequent freedom from fear and terror; and with the doctrine that in getting rid of our subjective individuality in Deity we get rid of the «old Adam.»

2. There were two points in particular on which, we are told, Hegel was always reticent in public—viz, the Personality of God and the Immortality of the Soul. In this he showed that good ordinary common-sense which he ignorantly mistook for the organon of philosophy professed by some; for he knew shrewdly enough the only view on these points possible on his philosophy. It is on these points especially, as well as the historic character of Christianity, on which the schisms of his followers or *clientèle* have taken place. We have three sections at least, all more or less holding by his method and phraseology. These have been called the Right, the Centre, and the Left. The Right retains but the phraseology of the master. We have the Centre party, represented, perhaps, best by Michelet of Berlin. This is the party of conciliation and compromise.

The most opposite dogmas on the ultimate questions of metaphysics and theology are held together. True to the principle of the identity of contradictories, we have pantheism and theism. The unconscious and impersonal Deity necessarily produces the world; and he becomes conscious in man. A common or collective immortality of man is necessary; because the Infinite must to eternity develop itself. But an immortality of each man or of the individual is by no means guaranteed; it is not necessary. As is has been put by Michelet, «the soul is immortal in God only, and God is personal in man.» Christianity is true and perfect; yet its real truth is only in the Hegelian philosophy. Therein its true essence is to be found. We have seen what that essence is. How much of the essence of Christianity remains, we find in Feuerbach's formula, «Let the will of man be done!»

Contradictory dogmas held in this fashion must in the end prove too strong for the slender thread of identity with which they are sought to be bound. And so history has shown. Even the unconscious absurdity of the logic must ultimately lead men to choose one or other side; and we can readily see which alone is possible on the principles of the system. Hence there very soon arose a left party in the school, and an extreme left. As to Deity, the shadowy distinction between the Spinozistic and the Hegelian original of things — substance and subject — readily became obscured and obliterated.

«An absolute personality,» Strauss tells us, «is simply a piece of nonsense, an absurdity.» What of the Infinite Ego after this? And why? «Because personality is an Ego concentred in itself by opposition to another; the absolute, on the contrary, is the infinite which embraces and contains all, which excludes no thing.» So far he is quite right; we cannot literally conceive of an absolute personality, as our own is a personality. Such a conception is utterly incompatible with even one finite personality, to say nothing of the totality of finite personalities. But what then? Does his solution help us, or must we take it? «God is not a person beside and above other persons; but he is the eternal movement of the universal making itself subject to itself; he only realizes himself and becomes objective in the subject. The personality of God ought not then to be conceived as individual; but as a total, universal personality, and instead of personifying the absolute, it is necessary to learn to conceive it as personifying itself to infinity.»

Now what really does this mean? God is the eternal movement of the universal making itself subject to itself! What may the universal be? one might ask. But apart from this, he or the universal is not a personality, to begin with; yet he becomes one and many personalities. He is a process, a movement; but what of its origin, law, progress, or term? What is this but a simple abstract statement that God means the on-going of things, and that the only personality he is or reaches is that in collective humanity? Can we properly retain the name of God after this? Are we to bow the knee to a juggle of words?

3. We speak of the attributes of God in ordinary language. We even believe in them. How do we now stand? Can an everlasting process have attributes? It is something working up to personality in finite beings. Has it attributes? The very name is meaningless. The

groping process to have goodness, wisdom, and love! It has not yet even self-consciousness. Yet I am asked to call it God! That I cannot do. The Ego which or in which the process becomes self-conscious is alone God. It never possessed an attribute till now; it was formerly simply a creature of necessary generation — though how it should be so much, nobody can tell.

4. Strauss, in the *Leben Jesu* (1835–6), had for his aim to exhibit the essence of Christianity, to deliver it from its external, accidental, and temporary forms. This was a true Hegelian conception. But it was clear that the historical character of the books and actors could not logically remain on the principles he assumed. Not only the historical character, but the distinctive doctrines, rapidly disappeared in the development of the school, in the writings of Ludwig Feuerbach, Bruno Bauer, and Arnold Ruge.

The movement was entirely in the line of diminishing, in fact abolishing the supernatural or divine, and equally the matter of fact or historical. The shadow of being in itself and pure thought to which the Divine had already been virtually reduced, naturally gave place to a deification of humanity — not merely an anthropomorphic god. Humanity itself having no true divine substratum, lost both the knowledge of its origin and the hope of immortality. The movement which began on the height of the loftiest idealism thus issued, as might have been anticipated, in a hopeless naturalism, — in the simple identification of all things with God and ethically in an intellectual arrogance which conceits itself as the depository of the secret of the universe, while it is too narrow to know even the facts.

VII. The representation of the doctrine of Dualism made by Hegel and his followers is thoroughly incorrect. Dualism is, of course, the great bugbear, whether it relate to the finite realities of consciousness and extension, or to the contrast of the finite and infinite realities. The predicates in these cases are said to be held as fixed and insuperable by the ordinary doctrine of dualism, whereas Hegelianism introduces identity, even the identity of contradictories. In particular it is insisted on (1), that on the ordinary dualistic presupposition, as it is called, there is an absolute opposition between the infinite and the finite; and (2), that this is unphilosophical, for the finite in this case must be regarded either as something independent of the infinite — and this involves an obvious contradiction — or it must be regarded as absolutely a nonentity. Statements of this sort abound in Hegelian writings.

One preliminary point to be noted here is, that the doctrine of the absolute opposition of finite and infinite is to be set down as unphilosophical, because it would involve a transparent contradiction. As contradiction is a legitimate moment in the Hegelian dialectic, the opposition must so far be right enough; and even if the opposition be absolute, the absurdity is not greater than the alleged identity of the two terms, by which it is sought to solve it. The consistent coexistence in thought of finite and infinite is certainly not a greater absurdity than a supposed concept in which the two become identical. Contradiction, according to criticism of this sort, must be absurd when it is regarded as fixed, and rational when it is regarded as superable. In the latter case, the only mistake is that there was no contradiction to begin with. But is this a true representation of the position of a dualistic philosophy in the matter? Is a dualist shut up to hold either the absolute independence of the finite or its nonentity? Why what is the opposition between the infinite and finite which the dualist really alleges? It is not an absolute opposition in the nature of things. It is an opposition merely in the act of knowledge. And the dualist is entitled to say this with a view to vindicate the position, until it is proved that all the opposition we think is identical with all the opposition which exists, or that these are convertible. For the Hegelian to assume this is to miss the whole point at issue between him and the dualist. The dualist does not accept the convertibility of knowledge and existence, and it is only on this assumption that he can be shut up, and then only on his own principles of logic, to the alternative of a contradiction between finite and infinite, or of the nonentity of the former, or for that matter, of the latter also. But no reasonably intelligent upholder of dualism, or, which is the same thing, the relativity of knowledge, would allow that the opposition which he finds in consciousness between finite and infinite is an absolute opposition, or one implying a fixity or absoluteness in the nature of things. In fact, the very phrases, limit of knowledge or relativity of knowledge, imply that the fixity or invariableness of the limit is in the thought or consciousness. When we speak of a limit to the understanding, we speak of the extent of our power of conceiving things; but we do not necessarily imply that the things conceived are really permanently and invariably fixed or determined by, or as is the capacity of, our thought. It is said for example, the thought of finite existence, say myself,—renders it impossible for us to think or conceive as coexisting with it an infinite self or being. For the sphere of being the finite self occupies, the sum of our being, is excluded from that sphere or sum possessed by the infinite self whom we attempt to conceive, and he is thus conceived as limited. But in doing so we do not affirm that a conciliation of this inconceivable is impossible, or that in the nature of things, the finite and infinite reality which we vainly attempt to conceive together are really incompatible. It is, therefore, nothing to the point to talk of the predicates of the understanding being regarded as fixed, permanent, or invariable, in the doctrine of the limitation of knowledge; for this is, after all, but a subjective limitation which is maintained, and is in no way inconsistent with the possibility of being, transcending conception. We say merely that we cannot conceive the compatibility of an infinite being with our own finite existence. We do not say or allow that what we conceive is necessarily convertible with what is, or with the possibilities of being. We are not, therefore, shut up to maintain the absolute opposition, and consequently the absolute contradiction in reality, of infinite and finite. Nor are we therefore compelled to regard the finite as a nonentity in the interest of the infinite, nor the infinite as a nonentity in the interest of the finite. For despite the limitation of our knowledge, in some way unknown to us as to process or ground, the co-reality of finite and infinite is, after all, compatible. Nay, in a transcendent sense, all being may be one. It is not even necessarily maintained on the doctrine of limitation that the finite is more than temporally distinct from the infinite. Evidence to decide those points must be sought for outside the theory of limitation. The real question at issue between absolutism and the theory of limitation is not as to the possibility of being out of and beyond limit, or being that surmounts limit — for the former is constantly loudly proclaiming this, and proclaiming it even as the only real being, but as to the possibility of our knowing such being, and connecting it conceivably and rationally with the being we know in consciousness. Relativist as well as absolutist maintains being above limit; they differ simply as to whether this can come within consciousness, in a sense in which it is to be regarded as truly and properly knowledge, and as to whether we can so relate the definite knowledge and being we have in consciousness with this transcendent something called knowledge and being. If what has been already said be at all well founded, we can rise above the temporal contrast of finite and infinite in thought only by sacrificing knowledge, by becoming the absolute identity of the two we are supposed to know. In this region we may expatiate at will among the « domos vacuas et inania regna » of verbalism; but we shall not gather from it either what is fitted to increase the reverence of the heart, or what may help us to read more intelligently the lessons of the past, or guide us better in the conduct of life.

All that the doctrine of limitation requires to make it consistent and valuable is, that whatever happens in the future of the universe, nothing shall occur in absolute contradiction of what we now rationally know and believe. Our present consciousness may be, probably will be, modified — in some sense, perhaps, transcended. But it must not be contradicted. Our analogical knowledge of God, even if raised to the stage of intuition, will receive greater compass, directness, and certainty; but this will not be at the expense or the reversal of a single thoroughly-tested intellectual or moral conviction.

DISCOURSE

ON THE

METHOD OF RIGHTLY CONDUCTING THE REASON AND SEEKING TRUTH IN THE SCIENCES

BY

DESCARTES

TRANSLATED FROM THE FRENCH AND COLLATED
WITH THE LATIN

PREFATORY NOTE BY THE AUTHOR.

If this Discourse appear too long to be read at once, it may be divided into six parts: and, in the first, will be found various considerations touching the Sciences; in the second, the principal rules of the Method which the Author has discovered; in the third, certain of the rules of Morals which he has deduced from this Method; in the fourth, the reasonings by which he establishes the existence of God and of the Human Soul, which are the foundations of his Metaphysic; in the fifth, the order of the Physical questions which he has investigated, and, in particular, the explication of the motion of the heart and of some other difficulties pertaining to Medicine, as also the difference between the soul of man and that of the brutes; and, in the last, what the Author believes to be required in order to greater advancement in the investigation of Nature than has yet been made, with the reasons that have induced him to write.

DISCOURSE ON METHOD.

PART I.

Good Sense is, of all things among men, the most equally distributed; for every one thinks himself so abundantly provided with it, that those even who are the most difficult to satisfy in everything else, do not usually desire a larger measure of this quality than they already possess. And in this it is not likely that all are mistaken: the conviction is rather to be held as testifying that the power of judging aright and of distinguishing Truth from Error, which is properly what is called Good Sense or Reason, is by nature equal in all men; and that the diversity of our opinions, consequently, does not arise from some being endowed with a larger share of Reason than others, but solely from this, that we conduct our thoughts along different ways, and do not fix our attention on the same objects. For to be possessed of a vigorous mind is not enough; the prime requisite is rightly to apply it. The greatest minds, as they are capable of the highest excellencies, are open likewise to the greatest aberrations; and those who travel very slowly may yet make far greater progress, provided they keep always to the straight road, than those who, while they run, forsake it.

For myself, I have never fancied my mind to be in any respect more perfect than those of the generality; on the contrary, I have often wished that I were equal to some others in promptitude of thought, or in clearness and distinctness of imagination, or in fullness and readiness of memory. And besides these, I know of no other qualities that contribute to the perfection of the mind; for as to the Reason or Sense, inasmuch as it is that alone which constitutes us men, and distinguishes us from the brutes, I am disposed to believe that it is to be found complete in each individual; and on this point to adopt the common opinion of philosophers, who say that the difference of greater and less holds only among the ACCIDENTS, and not among the FORMS or NATURES of INDIVIDUALS of the same SPECIES.

I will not hesitate, however, to avow my belief that it has been my singular good fortune to have very early in life fallen in with certain tracks which have conducted me to considerations and maxims, of which I have formed a Method that gives me the means, as I think, of gradually augmenting my knowledge, and of raising it by little and little to the highest point which the mediocrity of my talents and the brief duration of my life will permit me to reach. For I have already reaped from it such fruits, that, although I have been accustomed to think lowly enough of myself, and although when I look with the eye of a philosopher at the varied courses and pursuits of mankind at large, I find scarcely one which does not appear vain and useless, I nevertheless derive the highest satisfaction from the progress I conceive myself to have already made in the search after truth, and cannot help entertaining such expectations of the future as to believe that if, among the occupations of men as men, there is any one really excellent and important, it is that which I have chosen.

After all, it is possible I may be mistaken; and it is but a little copper and glass, perhaps, that I take for gold and diamonds. I know how very liable we are to delusion in what relates to ourselves, and also how much the judgments of our friends are to be suspected when given in our favor. But I shall endeavor in this Discourse to describe the paths I have followed, and to delineate my life as in a picture, in order that each one may be able to judge of them for himself, and that in the general opinion entertained of them, as gathered from current report, I myself may have a new help toward instruction to be added to those I have been in the habit of employing.

My present design, then, is not to teach the Method which each ought to follow for the right conduct of his Reason, but solely to describe the way in which I have endeavored to conduct my own. They who set themselves to give precepts must of course regard themselves as possessed of greater skill than those to whom they prescribe; and if they err in the slightest particular, they subject themselves to censure. But as this Tract is put forth merely as a history, or, if you will, as a tale, in which, amid some examples worthy of imitation, there will be found, perhaps, as many more which it were advisable not to follow, I hope it will prove useful to some without being hurtful to any, and that my openness will find some favor with all.

From my childhood, I have been familiar with letters; and as I was given to believe that by their help a clear and certain knowledge of all that is useful in life might be acquired, I was ardently desirous of instruction. But as soon as I had finished the entire course of study, at the close of which it is customary to be admitted into the order of the learned, I completely changed my opinion. For I found myself involved in so many doubts and errors, that I was convinced I had advanced no farther in all my attempts at learning, than the discovery at every turn of my own ignorance. And yet I was studying in one of the most celebrated Schools in Europe, in which I thought there must be learned men, if such were anywhere to be found. I had been taught all that others learned there; and not contented with the sciences actually taught us, I had, in addition, read all the books that had fallen into my hands, treating of such branches as are esteemed the most curious and rare. I knew the judgment which others had formed of me; and I did not find that I was considered inferior to my fellows, although there were among them some who were already marked out to fill the places of our instructors. And, in fine, our age appeared to me as flourishing, and as fertile in powerful minds as any preceding one. I was thus led to take the liberty of judging of all other men by myself, and of concluding that there was no science in existence that was of such a nature as I had previously been given to believe.

I still continued, however, to hold in esteem the studies of the Schools. I was aware that the Languages taught in them are necessary to the understanding of the writings of the ancients; that the grace of Fable stirs the mind; that the memorable deeds of History elevate it; and, if read with discretion, aid in forming the judgment; that the perusal of all excellent books is, as it were, to inter-

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view with the noblest men of past ages, who have written them, and even a studied interview, in which are discovered to us only their choicest thoughts; that Eloquence has incomparable force and beauty; that Poesy has its ravishing graces and delights; that in the Mathematics there are many refined discoveries eminently suited to gratify the inquisitive, as well as further all the arts and lessen the labor of man; that numerous highly useful precepts and exhortations to virtue are contained in treatises on Morals; that Theology points out the path to heaven; that Philosophy affords the means of discoursing with an appearance of truth on all matters, and commands the admiration of the more simple; that Jurisprudence, Medicine, and the other Sciences, secure for their cultivators honors and riches; and, in fine, that it is useful to bestow some attention upon all, even upon those abounding the most in superstition and error, that we may be in a position to determine their real value, and guard against being deceived.

But I believed that I had already given sufficient time to Languages, and likewise to the reading of the writings of the ancients, to their Histories and Fables. For to hold converse with those of other ages and to travel, are almost the same thing. It is useful to know something of the manners of different nations, that we may be enabled to form a more correct judgment regarding our own, and be prevented from thinking that everything contrary to our customs is ridiculous and irrational,—a conclusion usually come to by those whose experience has been limited to their own country. On the other hand, when too much time is occupied in traveling, we become strangers to our native country; and the over-curious in the customs of the past are generally ignorant of those of the present. Besides, fictitious narratives lead us to imagine the possibility of many events that are impossible; and even the most faithful histories, if they do not wholly misrepresent matters, or exaggerate their importance to render the account of them more worthy of perusal, omit, at least, almost always the meanest and least striking of the attendant circumstances; hence it happens that the remainder does not represent the truth, and that such as regulate their conduct by examples drawn from this source, are apt to fall into the extravagances of the knight-errants of Romance, and to entertain projects that exceed their powers.

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I esteemed Eloquence highly, and was in raptures with Poesy, but I thought that both were gifts of nature rather than fruits of study. Those in whom the faculty of Reason is predominant and who most skillfully dispose their thoughts with a view to render them clear and intelligible, are always the best able to persuade others of the truth of what they lay down, though they should speak only in the language of Lower Brittany, and be wholly ignorant of the rules of Rhetoric; and those whose minds are stored with the most agreeable fancies, and who can give expression to them with the greatest embellishment and harmony, are still the best poets, though unacquainted with the Art of Poetry.

I was especially delighted with the Mathematics, on account of the certitude and evidence of their reasonings: but I had not as yet a precise knowledge of their true use; and thinking that they but contributed to the advancement of the mechanical arts, I was astonished that foundations, so strong and solid, should have had no loftier superstructure reared on them. On the other hand, I compared the disquisitions of the ancient Moralists to very towering and magnificent palaces with no better foundation than sand and mud: they laud the virtues very highly, and exhibit them as estimable far above anything on earth; but they give us no adequate criterion of virtue, and frequently that which they designate with so fine a name is but apathy, or pride, or despair, or parricide.

I revered our Theology, and aspired as much as any one to reach heaven: but being given assuredly to understand that the way is not less open to the most ignorant than to the most learned, and that the revealed truths which lead to heaven are above our comprehension, I did not presume to subject them to the impotency of my Reason; and I thought that in order competently to undertake their examination, there was need of some special help from heaven, and of being more than man.

Of Philosophy I will say nothing, except that when I saw that it had been cultivated for many ages by the most distinguished men, and that yet there is not a single matter within its sphere which is not still in dispute, and nothing, therefore, which is above doubt, I did not presume to anticipate that my success would be greater in it than that of others; and further, when I considered the number of conflicting opinions touching a single matter that may be upheld by learned men, while there can be but one true, I reckoned as well-nigh false all that was only probable.

As to the other Sciences, inasmuch as these borrow their principles from Philosophy, I judged that no solid superstructures could be reared on foundations so infirm; and neither the honor nor the gain held out by them was sufficient to determine me to their cultivation: for I was not, thank Heaven, in a condition which compelled me to make merchandise of Science for the bettering of my fortune; and though I might not profess to scorn glory as a Cynic, I yet made very slight account of that honor which I hoped to acquire only through fictitious titles. And, in fine, of false Sciences I thought I knew the worth sufficiently to escape being deceived by the professions of an alchemist, the predictions of an astrologer, the impostures of a magician, or by the artifices and boasting of any of those who profess to know things of which they are ignorant.

For these reasons, as soon as my age permitted me to pass from under the control of my instructors, I entirely abandoned the study of letters, and resolved no longer to seek any other science than the knowledge of myself, or of the great book of the world. I spent the remainder of my youth in traveling, in visiting courts and armies, in holding intercourse with men of different dispositions and ranks, in collecting varied experience, in proving myself in the different situations into which fortune threw me, and, above all, in making such reflection on the matter of my experience as to secure my improvement. For it occurred to me that I should find much more truth in the reasonings of each individual with reference to the affairs in which he is personally interested, and the issue of which must presently punish him if he has judged amiss, than in those conducted by a man of letters in his study, regarding speculative matters that are of no practical moment, and followed by no consequences to himself, farther, perhaps, than that they foster his vanity the better the more remote they are from common sense; requiring, as they must in this case, the exercise of greater ingenuity and art to render them probable. In addition, I had always a most earnest desire to know how to distinguish the true from the false, in order that I might be able clearly to discriminate the right path in life, and proceed in it with confidence.

It is true that, while busied only in considering the manners of other men, I found here, too, scarce any ground for settled conviction, and remarked hardly less contradiction among them than in the opinions of the philosophers. So that the greatest advantage I derived from the study consisted in this, that, observing many things which, however extravagant and ridiculous to our apprehension, are yet by common consent received and approved by other great nations, I learned to entertain too decided a belief in regard to nothing of the truth of which I had been persuaded merely by example and custom; and thus I gradually extricated myself from many errors powerful enough to darken our Natural Intelligence, and incapacitate us in great measure from listening to Reason. But after I had been occupied several years in thus studying the book of the world, and in essaying to gather some experience, I at length resolved to make myself an object of study, and to employ all the powers of my mind in choosing the paths I ought to follow; an undertaking which was accompanied with greater success than it would have been had I never quitted my country or my books.

PART II.

I WAS then in Germany, attracted thither by the wars in that country, which have not yet been brought to a termination; and as I was returning to the army from the coronation of the Emperor, the setting in of winter arrested me in a locality where, as I found no society to interest me, and was besides fortunately undisturbed by any cares or passions, I remained the whole day in seclusion, with full opportunity to occupy my attention with my own thoughts. Of these one of the very first that occurred to me was, that there is seldom so much perfection in works composed of many separate parts, upon which different hands have been employed, as in those completed by a single master. Thus it is observable that the buildings which a single architect has planned and executed, are generally more elegant and commodious than those which several have attempted to improve, by making old walls serve for purposes for which they were not originally built. Thus also, those ancient cities which, from being at first only villages, have become, in course of time, large towns, are usually but ill laid out compared with the regularly constructed towns which a professional architect has freely planed on an open plain; so that although the several buildings of the former may often equal or surpass in beauty those of the latter, yet when one observes their indiscriminate juxtaposition, there a large one and here a small, and the consequent crookedness and irregularity of the streets, one is disposed to allege that chance rather than any human will guided by reason, must have led to such an arrangement. And if we consider that nevertheless there have been at all times certain officers whose duty it was to see that private buildings contributed to public ornament, the difficulty of reaching high perfection with but the materials of others to operate on, will be readily acknowledged. In the same way I fancied that those nations which, starting from a semi-barbarous state and advancing to civilization by slow degrees, have had their laws successively determined, and, as it were, forced upon them simply by experience of the hurtfulness of particular crimes and disputes, would by this process come to be possessed of less perfect institutions than those which, from the commencement of their association as communities, have followed the appointments of some wise legislator. It is thus quite certain that the constitution of the true religion, the ordinances of which are derived from God, must be incomparably superior to that of every other. And, to speak of human affairs, I believe that the past pre-eminence of Sparta was due not to the goodness of each of its laws in particular, for many of these were very strange, and even opposed to good morals, but to the circumstance that, originated by a single individual, they all tended to a single end. In the same way I thought that the sciences contained in books (such of them at least as are made up of probable reasonings, without demonstrations), composed as they are of the opinions of many different individuals massed together, are farther removed from truth than the simple inferences which a man of good sense using his natural and unprejudiced judgment draws respecting the matters of his experience. And because we have all to pass through a state of infancy to manhood, and have been of necessity, for a length of time, governed by our desires and preceptors (whose dictates were frequently conflicting, while neither perhaps always counseled us for the best), I farther concluded that it is almost impossible that our judgments can be so correct or solid as they would have been, had our Reason been mature from the moment of our birth, and had we always been guided by it alone.

It is true, however, that it is not customary to pull down all the houses of a town with the single design of rebuilding them differently, and thereby rendering the streets more handsome; but it often happens that a private individual takes down his own with the view of erecting it anew, and that people are even sometimes constrained to this when their houses are in danger of falling from age, or when the foundations are insecure. With this before me by way of example, I was persuaded that it would indeed be preposterous for a private individual to think of reforming a state by fundamentally changing it throughout, and overturning it in order to set it up amended; and the same I thought was true of any similar project for reforming the body of the Sciences, or the order of teaching them established in the Schools: but as for the opinions which up to that time I had embraced, I thought that I could not do better than resolve at once to sweep them wholly away, that I might afterward be in a position to admit either others more correct, or even perhaps the same when they had undergone the scrutiny of Reason. I firmly believed that in this way I should much better succeed in the conduct of my life, than if I built only upon old foundations, and leaned upon principles which, in my youth, I had taken upon trust. For although I recognized various difficulties in this undertaking, these were not, however, without remedy, nor once to be compared with such as attend the slightest reformation in public affairs. Large bodies, if once overthrown, are with great difficulty set up again, or even kept erect when once seriously shaken, and the fall of such is always disastrous. Then if there are any imperfections in the constitutions of states (and that many such exist the diversity of constitutions is alone sufficient to assure us), custom has without doubt materially smoothed their inconveniences, and has even managed to steer altogether clear of, or insensibly corrected, a number which sagacity could not have provided against with equal effect; and, in fine, the defects are almost always more tolerable than the change necessary for their removal; in the same manner that highways which wind among mountains, by being much frequented, become gradually so smooth and commodious, that it is much better to follow them than to seek a straighter path by climbing over the tops of rocks and descending to the bottoms of precipices.

Hence it is that I cannot in any degree approve of those restless and busy meddlers who, called neither by birth nor fortune to take part in the management of public affairs, are yet always projecting reforms; and if I thought that this Tract contained aught which might justify the suspicion that I was a victim of such folly, I would by no means permit its publication. I have never contemplated anything higher than the reformation of my own opinions, and basing them on a foundation wholly my own. And although my own satisfaction with my work has led me to present here a draft of it, I do not by any means therefore recommend to everyone else to make a similar attempt. Those whom God has endowed with a larger measure of genius will entertain, perhaps, designs still more exalted; but for the many I am much afraid lest even the present undertaking be more than they can safely venture to imitate. The single design to strip oneself of all past beliefs is one that ought not to be taken by everyone. The majority of men is composed of two classes, for neither of which would this be at all a befitting resolution: in the FIRST place, of those who with more than a due confidence in their own powers, are precipitate in their judgments and want the patience requisite for orderly and circumspect thinking;

whence it happens, that if men of this class once take the liberty to doubt of their accustomed opinions, and quit the beaten highway, they will never be able to thread the byway that would lead them by a shorter course, and will lose themselves and continue to wander for life; in the SECOND place, of those who, possessed of sufficient sense of modesty to determine that there are others who excel them in the power of discriminating between truth and error, and by whom they may be instructed, ought rather to content themselves with the opinions of such than trust for more correct to their own Reason.

For my own part, I should doubtless have belonged to the latter class, had I received instruction from but one master, or had I never known the diversities of opinion that from time immemorial have prevailed among men of the greatest learning. But I had become aware, even so early as during my college life, that no opinion, however absurd and incredible, can be imagined, which has not been maintained by some one of the philosophers; and afterward in the course of my travels I remarked that all those whose opinions are decidedly repugnant to ours are not on that account barbarians and savages, but on the contrary that many of these nations make an equally good, if not a better, use of their Reason than we do. I took into account also the very different character which a person brought up from infancy in France or Germany exhibits, from that which, with the same mind originally, this individual would have possessed had he lived always among the Chinese or with savages, and the circumstance that in dress itself the fashion which pleased us ten years ago, and which may again, perhaps, be received into favor before ten years have gone, appears to us at this moment extravagant and ridiculous. I was thus led to infer that the ground of our opinions is far more custom and example than any certain knowledge. And, finally, although such be the ground of our opinions, I remarked that a plurality of suffrages is no guarantee of truth where it is at all of difficult discovery, as in such cases it is much more likely that it will be found by one than by many. I could, however, select from the crowd no one whose opinions seemed worthy of preference, and thus I found myself constrained, as it

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were, to use my own Reason in the conduct of my life.

But like one walking alone and in the dark, I resolved to proceed so slowly and with such circumspection, that if I did not advance far, I would at least guard against falling. I did not even choose to dismiss summarily any of the opinions that had crept into my belief without having been introduced by Reason, but first of all took sufficient time carefully to satisfy myself of the general nature of the task I was setting myself, and ascertain the true Method by which to arrive at the knowledge of whatever lay within the compass of my powers.

Among the branches of Philosophy, I had, at an earlier period, given some attention to Logic, and among those of the Mathematics to Geometrical Analysis and Algebra,—three Arts or Sciences which ought, as I conceived, to contribute something to my design. But, on examination, I found that, as for Logic, its syllogisms and the majority of its other precepts are of avail rather in the communication of what we already know, or even as the Art of Lully, in speaking without judgment of things of which we are ignorant, than in the investigation of the unknown; and although this Science contains indeed a number of correct and very excellent precepts, there are, nevertheless, so many others, and these either injurious or superfluous, mingled with the former, that it is almost quite as difficult to effect a severance of the true from the false as it is to extract a Diana or a Minerva from a rough block of marble. Then as to the Analysis of the ancients and the Algebra of the moderns, besides that they embrace only matters highly abstract, and, to appearance, of no use, the former is so exclusively restricted to the consideration of figures, that it can exercise the Understanding only on condition of greatly fatiguing the Imagination;* and, in the latter, there is so complete a subjection to certain rules and formulas, that there results an art full of confusion and obscurity calculated to embarrass, instead of a science fitted to cultivate the mind. By these considerations I was induced to seek some other Method which would comprise the advantages of the three and be exempt

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*The Imagination must here be taken as equivalent simply to the Representative Faculty.— *Tr.*

from their defects. And as a multitude of laws often only hampers justice, so that a state is best governed when, with few laws, these are rigidly administered; in like manner, instead of the great number of precepts of which Logic is composed, I believed that the four following would prove perfectly sufficient for me, provided I took the firm and unwavering resolution never in a single instance to fail in observing them.

The FIRST was never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgment than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt.

The SECOND, to divide each of the difficulties under examination into as many parts as possible, and as might be necessary for its adequate solution.

The THIRD, to conduct my thoughts in such order that, by commencing with objects the simplest and easiest to know, I might ascend by little and little, and, as it were, step by step, to the knowledge of the more complex; assigning in thought a certain order even to those objects which in their own nature do not stand in a relation of antecedence and sequence.

At the LAST, in every case to make enumerations so complete, and reviews so general, that I might be assured that nothing was omitted.

The long chains of simple and easy reasonings by means of which geometers are accustomed to reach the conclusions of their most difficult demonstrations, had led me to imagine that all things, to the knowledge of which man is competent, are mutually connected in the same way, and that there is nothing so far removed from us as to be beyond our reach, or so hidden that we cannot discover it, provided only we abstain from accepting the false for the true, and always preserve in our thoughts the order necessary for the deduction of one truth from another. And I had little difficulty in determining the objects with which it was necessary to commence, for I was already persuaded that it must be with the simplest and easiest to know, and considering that of all those who have hitherto sought truth in the Sciences, the mathematicians alone have been able to find any demonstrations, that is, any certain and evident reasons, I did not doubt but that such must have been the rule of their investigations. I resolved to commence, therefore, with the examination of the simplest objects, not anticipating, however, from this any other advantage than that to be found in accustoming my mind to the love and nourishment of truth, and to a distaste for all such reasonings as were unsound. But I had no intention on that account of attempting to master all the particular Sciences commonly denominated Mathematics: but observing that, however different their objects, they all agree in considering only the various relations or proportions subsisting among those objects, I thought it best for my purpose to consider these proportions in the most general form possible, without referring them to any objects in particular, except such as would most facilitate the knowledge of them, and without by any means restricting them to these, that afterward I might thus be the better able to apply them to every other class of objects to which they are legitimately applicable. Perceiving further, that in order to understand these relations I should sometimes have to consider them one by one, and sometimes only to bear them in mind, or embrace them in the aggregate, I thought that, in order the better to consider them individually, I should view them as subsisting between straight lines, than which I could find no objects more simple, or capable of being more distinctly represented to my imagination and senses; and on the other hand, that in order to retain them in the memory, or embrace an aggregate of many, I should express them by certain characters the briefest possible. In this way I believed that I could borrow all that was best both in Geometrical Analysis and in Algebra, and correct all the defects of the one by help of the other.

And, in point of fact, the accurate observance of these few precepts gave me, I take the liberty of saying, such ease in unraveling all the questions embraced in these two sciences, that in the two or three months I devoted to their examination, not only did I reach solutions of questions I had formerly deemed exceedingly difficult, but even as regards questions of the solution of which I continued ignorant, I was enabled, as it appeared to me, to determine the means whereby, and the extent to which, a solution was possible; results attributable to the circumstance that I commenced with the simplest and most general truths, and that thus each truth discovered was a rule available in the discovery of subsequent ones. Nor in this perhaps shall I appear too vain, if it be considered that, as the truth on any particular point is one, whoever apprehends the truth, knows all that on that point can be known. The child, for example, who has been instructed in the elements of Arithmetic, and has made a particular addition, according to rule, may be assured that he has found, with respect to the sum of the numbers before him, all that in this instance is within the reach of human genius. Now, in conclusion, the Method which teaches adherence to the true order, and an exact enumeration of all the conditions of the thing sought includes all that gives certitude to the rules of Arithmetic.

But the chief ground of my satisfaction with this Method was the assurance I had of thereby exercising my reason in all matters, if not with absolute perfection, at least with the greatest attainable by me: besides, I was conscious that by its use my mind was becoming gradually habituated to clearer and more distinct conceptions of its objects; and I hoped also, from not having restricted this Method to any particular matter, to apply it to the difficulties of the other Sciences, with not less success than to those of Algebra. I should not, however, on this account have ventured at once on the examination of all the difficulties of the Sciences which presented themselves to me, for this would have been contrary to the order prescribed in the Method, but observing that the knowledge of such is dependent on principles borrowed from Philosophy, in which I found nothing certain, I thought it necessary, first of all to endeavor to establish its principles. And because I observed, besides, that an inquiry of this kind was of all others of the greatest moment, and one in which precipitancy and anticipation in judgment were most to be dreaded, I thought that I ought not to approach it till I had reached a more mature age (being at that time but twenty-three), and had first of all employed much of my time in preparation for the work, as well by eradicating from my mind all the erroneous opinions I had up to that moment accepted, as by amassing variety of experience to afford materials for my reasonings, and by continually exercising myself in my chosen Method with a view to increased skill in its application.

PART III.

And, finally, as it is not enough, before commencing to rebuild the house in which we live, that it be pulled down, and materials and builders provided, or that we engage in the work ourselves, according to a plan which we have beforehand carefully drawn out, but as it is likewise necessary that we be furnished with some other house in which we may live commodiously during the operations, so that I might not remain irresolute in my actions, while my Reason compelled me to suspend my judgment, and that I might not be prevented from living thenceforward in the greatest possible felicity, I formed a provisory code of Morals, composed of three or four maxims, with which I am desirous to make you acquainted.

The FIRST was to obey the laws and customs of my country, adhering firmly to the Faith in which, by the grace of God, I had been educated from my childhood, and regulating my conduct in every other matter according to the most moderate opinions, and the farthest removed from extremes, which should happen to be adopted in practice with general consent of the most judicious of those among whom I might be living. For, as I had from that time begun to hold my own opinions for nought because I wished to subject them all to examination, I was convinced that I could not do better than follow in the meantime the opinions of the most judicious; and although there are some perhaps among the Persians and Chinese as judicious as among ourselves, expediency seemed to dictate that I should regulate my practice conformably to the opinions of those with whom I should have to live; and it appeared to me that, in order to ascertain the real opinions of such, I ought rather to take cognizance of what they practiced than of what they said, not only because, in the corruption of our manners, there are few disposed to speak exactly as they believe, but also because very many are not aware of what it is that they really believe; for, as the act of mind by which a thing is believed is different from that by which we know that we believe it, the one act is often found without the other. Also, amid many opinions held in equal repute, I choose always the most moderate, as much for the reason that these are always the most convenient for practice, and probably the best (for all excess is generally vicious), as that, in the event of my falling into error, I might be at less distance from the truth than if, having chosen one of the extremes, it should turn out to be the other which I ought to have adopted. And I placed in the class of extremes especially all promises by which somewhat of our freedom is abridged; not that I disapproved of the laws which, to provide against the instability of men of feeble resolution, when what is sought to be accomplished is some good, permit engagements by vows and contracts binding the parties to persevere in it, or even, for the security of commerce, sanction similar engagements where the purpose sought to be realized is indifferent: but because I did not find anything on earth which was wholly superior to change, and because, for myself in particular, I hoped gradually to perfect my judgments, and not to suffer them to deteriorate, I would have deemed it a grave sin against good sense, if, for the reason that I approved of something at a particular time, I therefore bound myself to hold it for good at a subsequent time, when perhaps it had ceased to be so, or I had ceased to esteem it such.

My SECOND maxim was to be as firm and resolute in my actions as I was able, and not to adhere less steadfastly to the most doubtful opinions, when once adopted, than if they had been highly certain; imitating in this the example of travelers who, when they have lost their way in a forest, ought not to wander from side to side, far less remain in one place, but proceed constantly toward the same side in as straight a line as possible, without changing their direction for slight reasons, although perhaps it might be chance alone which at first determined the selection; for in this way, if they do not exactly reach the point they desire, they will come at least in the end to some place that will probably be preferable to the middle of a forest. In the same way, since in action it frequently happens that no delay is permissible, it is very certain that, when it is not in our power to determine what is true, we ought to act according to what is most probable; and even although we should not remark a greater probability in one opinion than in another, we ought notwithstanding to choose one or the other, and afterward consider it, in so far as it relates to practice, as no longer dubious, but manifestly true and certain, since the reason by which our choice has been determined is itself possessed of these qualities. This principle was sufficient thenceforward to rid me of all those repentings and pangs of remorse that usually disturb the consciences of such feeble and uncertain minds as, destitute of any clear and determinate principle of choice, allow themselves one day to adopt a course of action as the best, which they abandon the next, as the opposite.

My THIRD maxim was to endeavor always to conquer myself rather than fortune, and change my desires rather than the order of the world, and in general, accustom myself to the persuasion that, except our own thoughts, there is nothing absolutely in our power; so that when we have done our best in respect of things external to us, all wherein we fail of success is to be held, as regards us, absolutely impossible: and this single principle seemed to me sufficient to prevent me from desiring for the future anything which I could not obtain, and thus render me contented; for since our will naturally seeks those objects alone which the understanding represents as in some way possible of attainment, it is plain, that if we consider all external goods as equally beyond our power, we shall no more regret the absence of such goods as seem due to our birth, when deprived of them without any fault of ours, than our not possessing the kingdoms of China or Mexico; and thus making, so to speak, a virtue of necessity, we shall no more desire health in disease, or freedom in imprisonment, than we now do bodies incorruptible as diamonds, or the wings of birds to fly with. But I confess there is need of prolonged discipline and frequently repeated meditation to accustom the mind to view all objects in this light; and I believe that in this chiefly consisted the secret of the power of such philosophers as in former times were enabled to rise superior to the influence of fortune, and, amid suffering and poverty, enjoy a happiness which their gods might have envied. For, occupied incessantly with the consideration of the limits prescribed to their power by nature, they became so entirely convinced that nothing was at their disposal except their own thoughts, that this conviction was of itself sufficient to prevent their entertaining any desire of other objects; and over their thoughts they acquired a sway so absolute, that they had some ground on this account for esteeming themselves more rich and more powerful, more free and more happy, than other men who, whatever be the favors heaped on them by nature and fortune, if destitute of this philosophy, can never command the realization of all their desires.

In fine, to conclude this code of Morals, I thought of reviewing the different occupations of men in this life, with the view of making choice of the best. And, without wishing to offer any remarks on the employments of others, I may state that it was my conviction that I could not do better than continue in that in which I was engaged, viz, in devoting my whole life to the culture of my Reason, and in making the greatest progress I was able in the knowledge of truth, on the principles of the Method which I had prescribed to myself. This Method, from the time I had begun to apply it, had been to me the source of satisfaction so intense as to lead me to believe that more perfect or more innocent could not be enjoyed in this life; and as by its means I daily discovered truths that appeared to me of some importance, and of which other men were generally ignorant, the gratification thence arising so occupied my mind that I was wholly indifferent to every other object. Besides, the three preceding maxims were founded singly on the design of continuing the work of self-instruction. For since God has endowed each of us with some Light of Reason by which to distinguish truth from error, I could not have believed that I ought for a single moment to rest satisfied with the opinions of another, unless I had resolved to exercise my own judgment in examining these whenever I should be duly qualified for the task. Nor could I have proceeded on such opinions without scruple, had I supposed that I should thereby forfeit any advantage for attaining still more accurate, should such exist. And, in fine, I could not have restrained my desires, nor remained satisfied, had I not followed a path in which I thought myself certain of attaining all the knowledge to the acquisition of which I was competent, as well as the largest amount of what is truly good which I could ever hope to secure. Inasmuch as we neither seek nor shun any object except in so far as our understanding represents it as good or bad, all that is necessary to right action is right judgment, and to the best action the most correct judgment, that is, to the acquisition of all the virtues with all else that is truly valuable and within our reach; and the assurance of such an acquisition cannot fail to render us contented.

Having thus provided myself with these maxims, and having placed them in reserve along with the truths of Faith, which have ever occupied the first place in my belief, I came to the conclusion that I might with freedom set about ridding myself of what remained of my opinions. And, inasmuch as I hoped to be better able successfully to accomplish this work by holding intercourse with mankind, than by remaining longer shut up in the retirement where these thoughts had occurred to me, I betook me again to traveling before the winter was well ended. And, during the nine subsequent years, I did nothing but roam from one place to another, desirous of being a spectator rather than an actor in the plays exhibited on the theater of the world; and, as I made it my business in each matter to reflect particularly upon what might fairly be doubted and prove a source of error, I gradually rooted out from my mind all the errors which had hitherto crept into it. Not that in this I imitated the Sceptics who doubt only that they may doubt, and seek nothing beyond uncertainty itself; for, on the contrary, my design was singly to find ground of assurance, and cast aside the loose earth and sand, that I might reach the rock or the clay. In this, as appears to me, I was successful enough; for, since I endeavored to discover the falsehood or incertitude of the propositions I examined, not by feeble conjectures, but by clear and certain reasonings, I met with nothing so doubtful as not to yield some conclusion of adequate certainty, although this were merely the inference, that the matter in question contained nothing certain. And, just as in pulling down an old house, we usually reserve the ruins to contribute toward the erection, so, in destroying such of my opinions as I judged to be ill-founded, I made a variety of observations and acquired an amount of experience of which I availed myself in the establishment of more certain. And further, I continued to exercise myself in the Method I had prescribed; for, besides taking care in general to conduct all my thoughts according to its rules, I reserved some hours from time to time which I expressly devoted to the employment of the Method in the solution of Mathematical difficulties, or even in the solution likewise of some questions belonging to other Sciences, but which, by my having detached them from such principles of these Sciences as were of inadequate certainty, were rendered almost Mathematical: the truth of this will be manifest from the numerous examples contained in this volume.* And thus, without in appearance living otherwise than those who, with no other occupation than that of spending their lives agreeably and innocently, study to sever pleasure from vice, and who, that they may enjoy their leisure without ennui, have recourse to such pursuits as are honorable, I was nevertheless prosecuting my design, and making greater progress in the knowledge of truth, than I might, perhaps, have made had I been engaged in the perusal of books merely, or in holding converse with men of letters.

These nine years passed away, however, before I had come to any determinate judgment respecting the difficulties which form matter of dispute among the learned, or had commenced to seek the principles of any Philosophy more certain than the vulgar. And the examples of many men of the highest genius, who had, in former times, engaged in this inquiry, but, as appeared to me, without success, led me to imagine it to be a work of so much difficulty, that I would not perhaps have ventured on it so soon had I not heard it currently rumored that I had already completed the inquiry. I know not what were the grounds of this opinion; and, if my conversation contributed in any measure to its rise, this must have happened rather from my having confessed my ignorance with greater freedom than those are accustomed to do who have studied a little, and expounded, perhaps, the reasons that led me to doubt of many of those things that by others are esteemed certain, than from my having boasted of any system of Philosophy. But, as I am of a disposition that makes me unwilling to be esteemed different from what I really am, I thought it necessary to endeavor by all means to render myself worthy of the reputation accorded to me; and it is now exactly eight years since this desire constrained me to remove from all those places where interruption from any of my acquaintances was possible, and betake myself to this country,* in which the long duration of the war has led to the establishment of such discipline, that the armies maintained seem to be of use only in enabling the inhabitants to enjoy more securely the blessings of peace; and where in the midst of a great crowd actively engaged in business, and more careful of their own affairs than curious about those of others, I have been enabled to live without being deprived of any of the conveniences to be had in the most populous cities, and yet as solitary and as retired as in the midst of the most remote deserts.

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* The Discourse on Method was originally published along with the «Dioptrics,» the «Meteorics,» and the «Geometry.» See the «Introduction.»

PART IV.

I AM in doubt as to the propriety of making my first meditations, in the place above mentioned, matter of discourse; for these are so metaphysical, and so uncommon, as not, perhaps, to be acceptable to everyone. And yet, that it may be determined whether the foundations that I have laid are sufficiently secure, I find myself in a measure constrained to advert to them. I had long before remarked that, in relation to practice, it is sometimes necessary to adopt, as if above doubt, opinions which we discern to be highly uncertain, as has been already said; but as I then desired to give my attention solely to the search after truth, I thought that a procedure exactly the opposite was called for, and that I ought to reject as absolutely false all opinions in regard to which I could suppose the least ground for doubt, in order to ascertain whether after that there remained aught in my belief that was wholly indubitable. Accordingly, seeing that our senses sometimes deceive us, I was willing to suppose that there existed nothing really such as they presented to us; and because some men err in reasoning, and fall into paralogisms, even on the simplest matters of Geometry, I, convinced that I was as open to error as any other, rejected as false all the reasonings I had hitherto taken for demonstrations; and finally, when I considered that the very same thoughts (presentations) which we experience when awake may also be experienced when we are asleep, while there is at that time not one of them true, I supposed that all the objects (presentations) that had ever entered into my mind when awake, had in them no more truth than the illusions of my dreams. But immediately upon this I observed that, whilst I thus wished to think that all was false, it was absolutely necessary that I, who thus thought, should be somewhat; and as I observed that this truth, I THINK, HENCE I AM, was so certain and of such evidence, that no ground of doubt, however extravagant, could be alleged by the Sceptics capable of shaking it, I concluded that I might, without scruple, accept it as the first principle of the Philosophy of which I was in search.

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* Holland; to which country he withdrew in 1629.—*Tr.*

Cogito, ergo sum

In the next place, I attentively examined what I was, and as I observed that I could suppose that I had no body, and that there was no world nor any place in which I might be; but that I could not therefore suppose that I was not; and that, on the contrary, from the very circumstance that I thought to doubt of the truth of all things, it most clearly and certainly followed that I was; while, on the other hand, if I had only ceased to think, although all the other objects which I had ever imagined had been in reality existent, I would have had no reason to believe that I existed; I thence concluded that I was a substance whose whole essence or nature consists only in thinking, and which, that it may exist, has need of no place, nor is dependent on any material thing; so that "I," that is to say, the mind by which I am what I am, is wholly distinct from the body, and is even more easily known than the latter, and is such, that although the latter were not, it would still continue to be all that it is.

After this I inquired in general into what is essential to the truth and certainty of a proposition; for since I had discovered one which I knew to be true, I thought that I must likewise be able to discover the ground of this certitude. And as I observed that in the words I THINK, HENCE I AM, there is nothing at all which gives me assurance of their truth beyond this, that I see very clearly that in order to think it is necessary to exist, I concluded that I might take, as a general rule, the principle, that all the things which we very clearly and distinctly conceive are true, only observing, however, that there is some difficulty in rightly determining the objects which we distinctly conceive.

In the next place, from reflecting on the circumstance that I doubted, and that consequently my being was not wholly perfect (for I clearly saw that it was a greater perfection to know than to doubt), I was led to inquire whence I had learned to think of something more perfect than myself; and I clearly recognized that I must hold this notion from some Nature which in reality was more perfect. As for the thoughts of many other objects external to me, as of the sky, the earth, light, heat, and a thousand more, I was less at a loss to know whence these came; for since I remarked in them nothing which seemed to render them superior to myself, I could believe that, if these were true, they were dependencies on my own nature, in so far as it possessed a certain perfection, and, if they were false, that I held them from nothing, that is to say, that they were in me because of a certain imperfection of my nature. But this could not be the case with the idea of a Nature more perfect than myself; for to receive it from nothing was a thing manifestly impossible; and, because it is not less repugnant that the more perfect should be an effect of, and dependence on the less perfect, than that something should proceed from nothing, it was equally impossible that I could hold it from myself: accordingly, it but remained that it had been placed in me by a Nature which was in reality more perfect than mine, and which even possessed within itself all the perfections of which I could form any idea: that is to say, in a single word, which was God. And to this I added that, since I knew some perfections which I did not possess, I was not the only being in existence, (I will here, with your permission, freely use the terms of the Schools); but on the contrary, that there was of necessity some other more perfect Being upon whom I was dependent, and from whom I had received all that I possessed; for if I had existed alone, and independently of every other being, so as to have had from myself all the perfection, however little, which I actually possessed, I should have been able, for the same reason, to have had from myself the whole remainder of perfection, of the want of which I was conscious, and thus could of myself have become infinite, eternal, immutable, omniscient, all-powerful, and, in fine, have possessed all the perfections which I could recognize in God. For in order to know the nature of God (whose existence has been established by the preceding reasonings), as far as my own nature permitted, I had only to consider in reference to all the properties of which I found in my mind some idea, whether their possession was a mark of perfection; and I was assured that no one which indicated any imperfection was in him, and that none of the rest was awanting. Thus I perceived that doubt, inconstancy, sadness, and such like, could not be found in God, since I myself would have been happy to be free from them. Besides, I had ideas of many sensible and corporeal things; for although I might suppose that I was dreaming, and that all which I saw or imagined was false, I could not, nevertheless, deny that the ideas were in reality in my thoughts. But because I had already very clearly recognized in myself that the intelligent nature is distinct from the corporeal, and as I observed that all composition is an evidence of dependency, and that a state of dependency is manifestly a state of imperfection, I therefore determined that it could not be a perfection in God to be compounded of these two natures, and that consequently he was not so compounded; but that if there were any bodies in the world, or even any intelligences, or other natures that were not wholly perfect, their existence depended on his power in such a way that they could not subsist without him for a single moment.

I was disposed straightway to search for other truths; and when I had represented to myself the object of the geometers, which I conceived to be a continuous body, or a space indefinitely extended in length, breadth, and height or depth, divisible into divers parts which admit of different figures and sizes, and of being moved or transposed in all manner of ways (for all this the geometers suppose to be in the object they contemplate), I went over some of their simplest demonstrations. And, in the first place, I observed, that the great certitude which by common consent is accorded to these demonstrations, is founded solely upon this, that they are clearly conceived in accordance with the rules I have already laid down. In the next place, I perceived that there was nothing at all in these demonstrations which could assure me of the existence of their object; thus, for example, supposing a triangle to be given, I distinctly perceived that its three angles were necessarily equal to two right angles, but I did not on that account perceive anything which could assure me that any triangle existed; while, on the contrary, recurring to the examination of the idea of a Perfect Being, I found that the existence of the Being was comprised in the idea in the same way that the equality of its three angles to two right angles is comprised in the idea of a triangle, or as in the idea of a sphere, the equidistance of all points on its surface from the center, or even still more clearly; and that consequently it is at least as certain that God, who is this Perfect Being, is, or exists, as any demonstration of Geometry can be.

But the reason which leads many to persuade themselves that there is a difficulty in knowing this truth, and even also in knowing what their mind really is, is that they never raise their thoughts above sensible objects, and are so accustomed to consider nothing except by way of imagination, which is a mode of thinking limited to material objects, that all that is not imaginable seems to them not intelligible. The truth of this is sufficiently manifest from the single circumstance, that the philosophers of the Schools accept as a maxim that there is nothing in the Understanding which was not previously in the Senses, in which however it is certain that the ideas of God and of the soul have never been; and it appears to me that they who make use of their imagination to comprehend these ideas do exactly the same thing as if, in order to hear sounds or smell odors, they strove to avail themselves of their eyes; unless indeed that there is this difference, that the sense of sight does not afford us an inferior assurance to those of smell or hearing; in place of which, neither our imagination nor our senses can give us assurance of anything unless our Understanding intervene.

Finally, if there be still persons who are not sufficiently persuaded of the existence of God and of the soul, by the reasons I have adduced, I am desirous that they should know that all the other propositions, of the truth of which they deem themselves perhaps more assured, as that we have a body, and that there exist stars and an earth, and such like, are less certain; for, although we have a moral assurance of these thing, which is so strong that there is an appearance of extravagance in doubting of their existence, yet at the same time no one, unless his intellect is impaired, can deny, when the question relates to a metaphysical certitude, that there is sufficient reason to exclude entire assurance, in the observation that when asleep we can in the same way imagine ourselves possessed of another body and that we see other stars and another earth, when there is nothing of the kind. For how do we know that the thoughts which occur in dreaming are false rather than those other which we experience when awake, since the former are often not less vivid and distinct than the latter? And though men of the highest genius study this question as long as they please, I do not believe that they will be able to give any reason which can be sufficient to remove this doubt, unless they presuppose the existence of God. For, in the first place, even the principle which I have already taken as a rule, viz., that all the things which we clearly and distinctly conceive are true, is certain only because God is or exists, and because he is a Perfect Being, and because all that we possess is derived from him: whence it follows that our ideas or notions, which to the extent of their clearness and distinctness are real, and proceed from God, must to that extent be true. Accordingly, whereas we not unfrequently have ideas or notions in which some falsity is contained, this can only be the case with such as are to some extent confused and obscure, and in this proceed from nothing, (participate of negation), that is, exist in us thus confused because we are not wholly perfect. And it is evident that it is not less repugnant that falsity or imperfection, in so far as it is imperfection, should proceed from God, than that truth or perfection should proceed from nothing. But if we did not know that all which we possess of real and true proceeds from a Perfect and Infinite Being, however clear and distinct our ideas might be, we should have no ground on that account for the assurance that they possessed the perfection of being true.

But after the knowledge of God and of the soul has rendered us certain of this rule, we can easily understand that the truth of the thoughts we experience when awake, ought not in the slightest degree to be called in question on account of the illusions of our dreams. For if it happened that an individual, even when asleep, had some very distinct idea, as, for example, if a geometer should discover some new demonstration, the circumstance of his being asleep would not militate against its truth; and as for the most ordinary error of our dreams, which consists in their representing to us various objects in the same way as our external senses, this is not prejudicial, since it leads us very properly to suspect the truth of the ideas of sense; for we are not unfrequently deceived in the same manner when awake; as when persons in the jaundice see all objects yellow, or when the stars or bodies at a great distance appear to us much smaller than they are. For, in fine, whether awake or asleep, we ought never to allow ourselves to be persuaded of the truth of anything unless on the evidence of our Reason. And it must be noted that I say of our REASON, and not of our imagination or of our senses: thus, for example, although we very clearly see the sun, we ought not therefore to determine that it is only of the size which our sense of sight presents; and we may very distinctly imagine the head of a lion joined to the body of a goat, without being therefore shut up to the conclusion that a chimera exists; for it is not a dictate of Reason that what we thus see or imagine is in reality existent; but it plainly tells us that all our ideas or notions contain in them some truth; for otherwise it could not be that God, who is wholly perfect and veracious, should have placed them in us. And because our reasonings are never so clear or so complete during sleep as when we are awake, although sometimes the acts of our imagination are then as lively and distinct, if not more so than in our waking moments, Reason further dictates that, since all our thoughts cannot be true because of our partial imperfection, those possessing truth must infallibly be found in the experience of our waking moments rather than in that of our dreams.

PART V.

I WOULD here willingly have proceeded to exhibit the whole chain of truths which I deduced from these primary; but as with a view to this it would have been necessary now to treat of many questions in dispute among the learned, with whom I do not wish to be embroiled, I believe that it will be better for me to refrain from this exposition, and only mention in general what these truths are, that the more judicious may be able to determine whether a more special account of them would conduce to the public advantage. I have ever remained firm in my original resolution to suppose no other principle than that of which I have recently availed myself in demonstrating the existence of God and of the soul, and to accept as true nothing that did not appear to me more clear and certain than the demonstrations of the geometers had formerly appeared; and yet I venture to state that not only have I found means to satisfy myself in a short time on all the principal difficulties which are usually treated of in Philosophy, but I have also observed certain laws established in nature by God in such a manner, and of which he has impressed on our minds such notions, that after we have reflected sufficiently upon these, we cannot doubt that they are accurately observed in all that exists or takes place in the world: and farther, by considering the concatenation of these laws, it appears to me that I have discovered many truths more useful and more important than all I had before learned, or even had expected to learn.

But because I have essayed to expound the chief of these discoveries in a Treatise which certain considerations prevent me from publishing, I cannot make the results known more conveniently than by here giving a summary of the contents of this Treatise. It was my design to comprise in it all that, before I set myself to write it, I thought I knew of the nature of material objects. But like the painters who, finding themselves unable to represent equally well on a plain surface all the different faces of a solid body, select one of the chief, on which alone they make the light fall, and throwing the rest into the shade, allow them to appear only in so far as they can be seen while looking at the principal one; so, fearing lest I should not be able to comprise in my discourse all that was in my mind, I resolved to expound singly, though at considerable length, my opinions regarding light; then to take the opportunity of adding something on the sun and the fixed stars, since light almost wholly proceeds from them; on the heavens since they transmit it; on the planets, comets, and earth, since they reflect it; and particularly on all the bodies that are upon the earth, since they are either colored, or transparent, or luminous; and finally on man, since he is the spectator of these objects. Further, to enable me to cast this variety of subjects somewhat into the shade, and to express my judgment regarding them with greater freedom, without being necessitated to adopt or refute the opinions of the learned, I resolved to leave all the people here to their disputes, and to speak only of what would happen in a new world, if God were now to create somewhere in the imaginary spaces matter sufficient to compose one, and were to agitate variously and confusedly the different parts of this matter, so that there resulted a chaos as disordered as the poets ever feigned, and after that did nothing more than lend his ordinary concurrence to nature, and allow her to act in accordance with the laws which he had established. On this supposition, I, in the first place, described this matter, and essayed to represent it in such a manner that to my mind there can be nothing clearer and more intelligible, except what has been recently said regarding God and the soul; for I even expressly supposed that it possessed none of those forms or qualities which are so debated in the Schools, nor in general anything the knowledge of which is not so natural to our minds that no one can so much as imagine himself ignorant of it. Besides, I have pointed out what are the laws of nature; and with no other principle upon which to found my reasonings except the infinite perfection of God, I endeavored to demonstrate all those about which there could be any room for doubt, and to prove that they are such, that even if God had created more worlds, there could have been none in which these laws were not observed. Thereafter, I showed how the greatest part of the matter of this chaos must, in accordance with these laws, dispose and arrange itself in such a way as to present the appearance of heavens; how in the meantime some of its parts must compose an earth and some planets and comets, and others a sun and fixed stars. And, making a digression at this stage on the subject of light, I expounded at considerable length what the nature of that light must be which is found in the sun and the stars, and how thence in an instant of time it traverses the immense spaces of the heavens, and how from the planets and comets it is reflected toward the earth. To this I likewise added much respecting the substance, the situation, the motions, and all the different qualities of these heavens and stars; so that I thought I had said enough respecting them to show that there is nothing observable in the heavens or stars of our system that must not, or at least may not, appear precisely alike in those of the system which I described. I came next to speak of the earth in particular, and to show how, even though I had expressly supposed that God had given no weight to the matter of which it is composed, this should not prevent all its parts from tending exactly to its center; how with water and air on its surface, the disposition of the heavens and heavenly bodies, more especially of the moon, must cause a flow and ebb, like in all its circumstances to that observed in our seas, as also a certain current both of water and air from east to west, such as is likewise observed between the tropics; how the mountains, seas, fountains, and rivers might naturally be formed in it, and the metals produced in the mines, and the plants grow in the fields; and in general, how all the bodies which are commonly denominated mixed or composite might be generated: and, among other things in the discoveries alluded to, inasmuch as besides the stars, I knew nothing except fire which produces light, I spared no pains to set forth all that pertains to its nature, the manner of its production and support, and to explain how heat is sometimes found without light, and light without heat; to show how it can induce various colors upon different bodies and other diverse qualities; how it reduces some to a liquid state and hardens others; how it can consume almost all bodies, or convert them into ashes and smoke; and finally, how from these ashes, by the mere intensity of its action, it forms glass: for as this transmutation of ashes into glass appeared to me as wonderful as any other in nature, I took a special pleasure in describing it.

I was not, however, disposed, from these circumstances, to conclude that this world had been created in the manner I described; for it is much more likely that God made it at the first such as it was to be. But this is certain, and an opinion commonly received among theologians, that the action by which he now sustains it is the same with that by which he originally created it; so that even although he had from the beginning given it no other form than that of chaos, provided only he had established certain laws of nature, and had lent it his concurrence to enable it to act as it is wont to do, it may be believed without discredit to the miracle of creation, that, in this way alone, things purely material might, in course of time, have become such as we observe them at present; and their nature is much more easily conceived when they are beheld coming in this manner gradually into existence, than when they are only considered as produced at once in a finished and perfect state.

From the description of inanimate bodies and plants, I passed to animals, and particularly to man. But since I had not as yet sufficient knowledge to enable me to treat of these in the same manner as of the rest, that is to say, by deducing effects from their causes, and by showing from what elements and in what manner nature must produce them, I remained satisfied with the supposition that God formed the body of man wholly like to one of ours, as well in the external shape of the members as in the internal conformation of the organs, of the same matter with that I had described, and at first placed in it no Rational Soul, nor any other principle, in room of the Vegetative or Sensitive Soul, beyond kindling in the heart one of those fires without light, such as I had already described, and which I thought was not different from the heat in hay that has been heaped together before it is dry, or that which causes fermentation in new wines before they are run clear of the fruit. For, when I examined the kind of functions which might, as consequences of this supposition, exist in this body, I found precisely all those which may exist in us independently of all power of thinking, and consequently without being in any measure owing to the soul; in other words, to that part of us which is distinct from the body, and of which it has been said above that the nature distinctly consists in thinking, functions in which the animals void of Reason may be said wholly to resemble us; but among which I could not discover any of those that, as dependent on thought alone, belong to us as men, while, on the other hand, I did afterward discover these as soon as I supposed God to have created a Rational Soul, and to have annexed it to this body in a particular manner which I described.

But, in order to show how I there handled this matter, I mean here to give the explication of the motion of the heart and arteries, which, as the first and most general motion observed in animals, will afford the means of readily determining what should be thought of all the rest. And that there may be less difficulty in understanding what I am about to say on this subject, I advise those who are not versed in Anatomy, before they commence the perusal of these observations, to take the trouble of getting dissected in their presence the heart of some large animal possessed of lungs, (for this is throughout sufficiently like the human), and to have shown to them its two ventricles or cavities: in the first place, that in the right side, with which correspond two very ample tubes, viz., the hollow vein, (*vena cava*), which is the principal receptacle of the blood, and the trunk of the tree, as it were, of which all the other veins in the body are branches; and the arterial vein, (*vena arteriosa*), inappropriately so denominated, since it is in truth only an artery, which, taking its rise in the heart, is divided, after passing out from it, into many branches which presently disperse themselves all over the lungs; in the second place, the cavity in the left side, with which correspond in the same manner two canals in size equal to or larger than the preceding, viz, the venous artery, (*arteria venosa*), likewise inappropriately thus designated, because it is simply a vein which comes from the lungs, where it is divided into many branches, interlaced with those of the arterial vein, and those of the tube called the windpipe, through which the air we breathe enters; and the great artery which, issuing from the heart, sends its branches all over the body. I should wish also that such persons were carefully shown the eleven pellicles which, like so many small valves, open and shut the four orifices that are in these two cavities, viz., three at the entrance of the hollow vein, where they are disposed in such a manner as by no means to prevent the blood which it contains from flowing into the right ventricle of the heart, and yet exactly to prevent its flowing out; three at the entrance to the arterial vein, which, arranged in a manner exactly the opposite of the former, readily permit the blood contained in this cavity to pass into the lungs, but hinder that contained in the lungs from returning to this cavity; and, in like manner, two others at the mouth of the venous artery, which allow the blood from the lungs to flow into the left cavity of the heart, but preclude its return; and three at the mouth of the great artery, which suffer the blood to flow from the heart, but prevent its reflux. Nor do we need to seek any other reasons for the number of these pellicles beyond this that the orifice of the venous artery being of an oval shape from the nature of its situation, can be adequately closed with two, whereas the others being round are more conveniently closed with three. Besides, I wish such persons to observe that the grand artery and the arterial vein are of much harder and firmer texture than the venous artery and the hollow vein; and that the two last expand before entering the heart, and there form, as it were, two pouches denominated the auricles of the heart, which are composed of a substance similar to that of the heart itself; and that there is always more warmth in the heart than in any other part of the body; and, finally, that this heat is capable of causing any drop of blood that passes into the cavities rapidly to expand and dilate, just as all liquors do when allowed to fall drop by drop into a highly heated vessel.

For, after these things, it is not necessary for me to say anything more with a view to explain the motion of the heart, except that when its cavities are not full of blood, into these the blood of necessity flows, from the hollow vein into the right, and from the venous artery into the left; because these two vessels are always full of blood, and their orifices, which are turned toward the heart, cannot then be closed. But as soon as two drops of blood have thus passed, one into each of the cavities, these drops which cannot but be very large, because the orifices through which they pass are wide, and the vessels from which they come full of blood, are immediately rarefied, and dilated by the heat they meet with. In this way they cause the whole heart to expand, and at the same time press home and shut the five small valves that are at the entrances of the two vessels from which they flow, and thus prevent any more blood from coming down into the heart, and becoming more and more rarefied, they push open the six small valves that are in the orifices of the other two vessels, through which they pass out, causing in this way all the branches of the arterial vein and of the grand artery to expand almost simultaneously with the heart—which immediately thereafter begins to contract, as do also the arteries, because the blood that has entered them has cooled, and the six small valves close, and the five of the hollow vein and of the venous artery open anew and allow a passage to other two drops of blood, which cause the heart and the arteries again to expand as before. And, because the blood which thus enters into the heart passes through these two pouches called auricles, it thence happens that their motion is the contrary of that of the heart, and that when it expands they contract. But lest those who are ignorant of the force of mathematical demonstrations, and who are not accustomed to distinguish true reasons from mere verisimilitudes, should venture, without examination, to deny what has been said, I wish it to be considered that the motion which I have now explained follows as necessarily from the very arrangement of the parts, which may be observed in the heart by the eye alone, and from the heat which may be felt with the fingers, and from the nature of the blood as learned from experience, as does the motion of a clock from the power, the situation, and shape of its counterweights and wheels.

But if it be asked how it happens that the blood in the veins, flowing in this way continually into the heart, is not exhausted, and why the arteries do not become too full, since all the blood which passes through the heart flows into them, I need only mention in reply what has been written by a physician* of England, who has the honor of having broken the ice on this subject, and of having been the first to teach that there are many small passages at the extremities of the arteries, through which the blood received by them from the heart passes into the small branches of the veins, whence it again returns to the heart; so that its course amounts precisely to a perpetual circulation. Of this we have abundant proof in the ordinary experience of surgeons, who, by binding the arm with a tie of moderate straitness above the part where they open the vein, cause the blood to flow more copiously than it would have done without any ligature; whereas quite the contrary would happen were they to bind it below; that is, between the hand and the opening, or were to make the ligature above the opening very tight. For it is manifest that the tie, moderately straitened, while adequate to hinder the blood already in the arm from returning toward the heart by the veins, cannot on that account prevent new blood from coming forward through the arteries, because these are situated below the veins, and their coverings, from their greater consistency, are more difficult to compress; and also that the blood which comes from the heart tends to pass through them to the hand with greater force than it does to return from the hand to the heart through the veins. And since the latter current escapes from the arm by the opening made in one of the veins, there must of necessity be certain passages below the ligature, that is, toward the extremities of the arm through which it can come thither from the arteries.

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* Harvey.—*Lat. Tr.*

This physician likewise abundantly establishes what he has advanced respecting the motion of the blood, from the existence of certain pellicles, so disposed in various places along the course of the veins, in the manner of small valves, as not to permit the blood to pass from the middle of the body toward the extremities, but only to return from the extremities to the heart; and farther, from experience which shows that all the blood which is in the body may flow out of it in a very short time through a single artery that has been cut, even although this had been closely tied in the immediate neighborhood of the heart, and cut between the heart and the ligature, so as to prevent the supposition that the blood flowing out of it could come from any other quarter than the heart.

But there are many other circumstances which evince that what I have alleged is the true cause of the motion of the blood: thus, in the first place, the difference that is observed between the blood which flows from the veins, and that from the arteries, can only arise from this, that being rarefied, and, as it were, distilled by passing through the heart, it is thinner, and more vivid, and warmer immediately after leaving the heart, in other words, when in the arteries, than it was a short time before passing into either, in other words, when it was in the veins; and if attention be given, it will be found that this difference is very marked only in the neighborhood of the heart; and is not so evident in parts more remote from it. In the next place, the consistency of the coats of which the arterial vein and the great artery are composed, sufficiently shows that the blood is impelled against them with more force than against the veins. And why should the left cavity of the heart and the great artery be wider and larger than the right cavity and the arterial vein, were it not that the blood of the venous artery, having only been in the lungs after it has passed through the heart, is thinner, and rarefies more readily, and in a higher degree, than the blood which proceeds immediately from the hollow vein? And what can physicians conjecture from feeling the pulse unless they know that according as the blood changes its nature it can be rarefied by the warmth of the heart, in a higher or lower degree, and more or less quickly than before? And if it be inquired how this heat is communicated to the other members, must it not be admitted that this is effected by means of the blood, which, passing through the heart, is there heated anew, and thence diffused over all the body? Whence it happens, that if the blood be withdrawn from any part, the heat is likewise withdrawn by the same means; and although the heart were as hot as glowing iron, it would not be capable of warming the feet and hands as at present, unless it continually sent thither new blood. We likewise perceive from this, that the true use of respiration is to bring sufficient fresh air into the lungs, to cause the blood which flows into them from the right ventricle of the heart, where it has been rarefied and, as it were, changed into vapors, to become thick, and to convert it anew into blood, before it flows into the left cavity, without which process it would be unfit for the nourishment of the fire that is there. This receives confirmation from the circumstance, that it is observed of animals destitute of lungs that they have also but one cavity in the heart, and that in children who cannot use them while in the womb, there is a hole through which the blood flows from the hollow vein into the left cavity of the heart and a tube through which it passes from the arterial vein into the grand artery without passing through the lung. In the next place, how could digestion be carried on in the stomach, unless the heart communicated heat to it through the arteries, and along with this certain of the more fluid parts of the blood, which assist in the dissolution of the food that has been taken in? Is not also the operation which converts the juice of food into blood easily comprehended, when it is considered that it is distilled by passing and repassing through the heart perhaps more than one or two hundred times in a day? And what more need be adduced to explain nutrition, and the production of the different humors of the body, beyond saying, that the force with which the blood, in being rarefied, passes from the heart toward the extremities of the arteries, causes certain of its parts to remain in the members at which they arrive, and there occupy the place of some others expelled by them; and that according to the situation, shape, or smallness of the pores with which they meet, some rather than others flow into certain parts, in the same way that some sieves are observed to act, which, by being variously perforated, serve to separate different species of grain? And, in the last place, what above all is here worthy of observation, is the generation of the animal spirits, which are like a very subtle wind, or rather a very pure and vivid flame, which, continually ascending in great abundance from the heart to the brain, thence penetrates through the nerves into the muscles, and gives motion to all the members; so that to account for other parts of the blood which, as most agitated and penetrating, are the fittest to compose these spirits, proceeding toward the brain, it is not necessary to suppose any other cause, than simply, that the arteries which carry them thither proceed from the heart in the most direct lines, and that, according to the rules of Mechanics, which are the same with those of Nature, when many objects tend at once to the same point where there is not sufficient room for all (as is the case with the parts of the blood which flow forth from the left cavity of the heart and tend toward the brain), the weaker and less agitated parts must necessarily be driven aside from that point by the stronger which alone in this way reach it.

I had expounded all these matters with sufficient minuteness in the Treatise which I formerly thought of publishing. And after these, I had shown what must be the fabric of the nerves and muscles of the human body to give the animal spirits contained in it the power to move the members, as when we see heads shortly after they have been struck off still move and bite the earth, although no longer animated; what changes must take place in the brain to produce waking, sleep and dreams; how light, sounds, odors, tastes, heat, and all the other qualities of external objects impress it with different ideas by means of the senses; how hunger, thirst, and the other internal affections can likewise impress upon it divers ideas; what must be understood by the common sense (*sensus communis*) in which these ideas are received, by the memory which retains them, by the fantasy which can change them in various ways, and out of them compose new ideas, and which, by the same means, distributing the animal spirits through the muscles, can cause the members of such a body to move in as many different ways, and in a manner as suited, whether to the objects that are presented to its senses or to its internal affections, as can take place in our own case apart from the guidance of the will. Nor will this appear at all strange to those who are acquainted with the variety of movements performed by the different automata, or moving machines fabricated by human industry, and that with help of but few pieces compared with the great multitude of bones, muscles, nerves, arteries, veins, and other parts that are found in the body of each animal. Such persons will look upon this body as a machine made by the hands of God, which is incomparably better arranged, and adequate to movements more admirable than is any machine of human invention. And here I specially stayed to show that, were there such machines exactly resembling in organs and outward form an ape or any other irrational animal, we could have no means of knowing that they were in any respect of a different nature from these animals; but if there were machines bearing the image of our bodies, and capable of imitating our actions as far as it is morally possible, there would still remain two most certain tests whereby to know that they were not therefore really men. Of these the first is that they could never use words or other signs arranged in such a manner as is competent to us in order to declare our thoughts to others: for we may easily conceive a machine to be so constructed that it emits vocables, and even that it emits some correspondent to the action upon it of external objects which cause a change in its organs; for example, if touched in a particular place it may demand what we wish to say to it; if in another, it may cry out that it is hurt, and such like; but not that it should arrange them variously so as appositely to reply to what is said in its presence, as men of the lowest grade of intellect can do. The second test is, that although such machines might execute many things with equal or perhaps greater perfection than any of us, they would, without doubt, fail in certain others from which it could be discovered that they did not act from knowledge, but solely from the disposition of their organs: for while Reason is an universal instrument that is alike available on every occasion, these organs, on the contrary, need a particular arrangement for each particular action; whence it must be morally impossible that there should exist in any machine a diversity of organs sufficient to enable it to act in all the occurrences of life, in the way in which our reason enables us to act. Again, by means of these two tests we may likewise know the difference between men and brutes. For it is highly deserving of remark, that there are no men so dull and stupid, not even idiots, as to be incapable of joining together different words, and thereby constructing a declaration by which to make their thoughts understood; and that on the other hand, there is no other animal, however perfect or happily circumstanced which can do the like. Nor does this inability arise from want of organs: for we observe that magpies and parrots can utter words like ourselves, and are yet unable to speak as we do, that is, so as to show that they understand what they say; in place of which men born deaf and dumb, and thus not less, but rather more than the brutes, destitute of the organs which others use in speaking, are in the habit of spontaneously inventing certain signs by which they discover their thoughts to those who, being usually in their company, have leisure to learn their language. And this proves not only that the brutes have less Reason than man, but that they have none at all: for we see that very little is required to enable a person to speak; and since a certain inequality of capacity is observable among animals of the same species, as well as among men, and since some are more capable of being instructed than others, it is incredible that the most perfect ape or parrot of its species, should not in this be equal to the most stupid infant of its kind, or at least to one that was crack-brained, unless the soul of brutes were of a nature wholly different from ours. And we ought not to confound speech with the natural movements which indicate the passions, and can be imitated by machines as well as manifested by animals; nor must it be thought with certain of the ancients, that the brutes speak, although we do not understand their language. For if such were the case, since they are endowed with many organs analogous to ours, they could as easily communicate their thoughts to us as to their fellows. It is also very worthy of remark, that, though there are many animals which manifest more industry than we in certain of their actions, the same animals are yet observed to show none at all in many others: so that the circumstance that they do better than we does not prove that they are endowed with mind, for it would thence follow that they possessed greater Reason than any of us, and could surpass us in all things; on the contrary, it rather proves that they are destitute of Reason, and that it is Nature which acts in them according to the disposition of their organs: thus it is seen, that a clock composed only of wheels and weights, can number the hours and measure time more exactly than we with all our skill.

I had after this described the Reasonable Soul, and shown that it could by no means be educed from the power of matter, as the other things of which I had spoken, but that it must be expressly created; and that it is not sufficient that it be lodged in the human body exactly like a pilot in a ship, unless perhaps to move its members, but that it is necessary for it to be joined and united more closely to the body, in order to have sensations and appetites similar to ours, and thus constitute a real man. I here entered, in conclusion upon the subject of the soul at considerable length, because it is of the greatest moment: for after the error of those who deny the existence of God, an error which I think I have already sufficiently refuted, there is none that is more powerful in leading feeble minds astray from the straight path of virtue than the supposition that the soul of the brutes is of the same nature with our own; and consequently that after this life we have nothing to hope for or fear, more than flies and ants; in place of which, when we know how far they differ we much better comprehend the reasons which establish that the soul is of a nature wholly independent of the body, and that consequently it is not liable to die with the latter; and, finally, because no other causes are observed capable of destroying it, we are naturally led thence to judge that it is immortal.

PART VI.

THREE years have now elapsed since I finished the Treatise containing all these matters; and I was beginning to revise it, with the view to put it into the hands of a printer, when I learned that persons to whom I greatly defer, and whose authority over my action is hardly less influential than is my own Reason over my thoughts, had condemned a certain doctrine in Physics, published a short time previously by another individual,* to which I will not say that I adhered, but only that, previously to their censure, I had observed in it nothing which I could imagine to be prejudicial either to religion or to the state, and nothing therefore which would have prevented me from giving expression to it in writing, if Reason had persuaded me of its truth; and this led me to fear lest among my own doctrines likewise some one might be found in which I had departed from the truth, notwithstanding the great care I have always taken not to accord belief to new opinions of which I had not the most certain demonstrations, and not to give expression to aught that might tend to the hurt of any one. This has been sufficient to make me alter my purpose of publishing them; for although the reasons by which I had been induced to take this resolution were very strong, yet my inclination, which has alway been hostile to writing books, enabled me immediately to discover other considerations sufficient to excuse me for not undertaking the task. And these reasons, on one side and the other, are such, that not only is it in some measure my interest here to state them, but that of the public, perhaps, to know them.

I have never made much account of what has proceeded from my own mind; and so long as I gathered no other advantage from the Method I employ beyond satisfying myself on some difficulties belonging to the speculative sciences, or endeavoring to regulate my actions according to the principles it taught me, I never thought myself bound to publish anything respecting it. For in what regards manners, every one is so full of his own wisdom, that there might be found as many reformers as heads, if any were allowed to take upon themselves the task of mending them, except those whom God has constituted the supreme rulers of his people, or to whom he has given sufficient grace and zeal to be prophets; and although my speculations greatly pleased myself, I believed that others had theirs, which perhaps pleased them still

* Galileo.— *Tr.*

more. But as soon as I had acquired some general notions respecting Physics, and beginning to make trial of them in various particular difficulties, had observed how far they can carry us, and how much they differ from the principles that have been employed up to the present time, I believed that I could not keep them concealed without sinning grievously against the law by which we are bound to promote, as far as in us lies, the general good of mankind. For by them I perceived it to be possible to arrive at knowledge highly useful in life; and in room of the Speculative Philosophy usually taught in the Schools, to discover a Practical, by means of which, knowing the force and action of fire, water, air, the stars, the heavens, and all the other bodies that surround us, as distinctly as we know the various crafts of our artisans, we might also apply them in the same way to all the uses to which they are adapted, and thus render ourselves the lords and possessors of nature. And this is a result to be desired, not only in order to the invention of an infinity of arts, by which we might be enabled to enjoy without any trouble the fruits of the earth, and all its comforts, but also and especially for the preservation of health, which is without doubt, of all the blessings of this life, the first and fundamental one; for the mind is so intimately dependent upon the condition and relation of the organs of the body, that if any means can ever be found to render men wiser and more ingenious than hitherto, I believe that it is in Medicine they must be sought for. It is true that the science of Medicine, as it now exists, contains few things whose utility is very remarkable: but without any wish to depreciate it, I am confident that there is no one, even among those whose profession it is, who does not admit that all at present known in it is almost nothing in comparison of what remains to be discovered; and that we could free ourselves from an infinity of maladies of body as well as of mind, and perhaps also even from the debility of age, if we had sufficiently ample knowledge of their causes, and of all the remedies provided for us by Nature. But since I designed to employ my whole life in the search after so necessary a Science, and since I had fallen in with a path which seems to me such, that if any one follow it he must inevitably reach the end desired, unless he be hindered either by the shortness of life or the want of experiments, I judged that there could be no more effectual provision against these two impediments than if I were faithfully to communicate to the public all the little I might myself have found, and incite men of superior genius to strive to proceed farther, by contributing, each according to his inclination and ability, to the experiments which it would be necessary to make, and also by informing the public of all they might discover, so that, by the last beginning where those before them had left off, and thus connecting the lives and labors of many, we might collectively proceed much farther than each by himself could do.

I remarked, moreover, with respect to experiments, that they become always more necessary the more one is advanced in knowledge; for, at the commencement, it is better to make use only of what is spontaneously presented to our senses, and of which we cannot remain ignorant, provided we bestow on it any reflection, however slight, than to concern ourselves about more uncommon and recondite phenomena: the reason of which is, that the more uncommon often only mislead us so long as the causes of the more ordinary are still unknown; and the circumstances upon which they depend are almost always so special and minute as to be highly difficult to detect. But in this I have adopted the following order: first, I have essayed to find in general the principles, or first causes of all that is or can be in the world, without taking into consideration for this end anything but God himself who has created it, and without educing them from any other source than from certain germs of truths naturally existing in our minds. In the second place, I examined what were the first and most ordinary effects that could be deduced from these causes; and it appears to me that, in this way, I have found heavens, stars, and earth, and even on the earth, water, air, fire, minerals, and some other things of this kind, which of all others are the most common and simple, and hence the easiest to know. Afterward, when I wished to descend to the more particular, so many diverse objects presented themselves to me, that I believed it to be impossible for the human mind to distinguish the forms or species of bodies that are upon the earth, from an infinity of others which might have been, if it had pleased God to place them there, or consequently to apply them to our use, unless we rise to causes through their effects, and avail ourselves of many particular experiments. Thereupon, turning over in my mind all the objects that had ever been presented to my senses, I freely venture to state that I have never observed any which I could not satisfactorily explain by the principles I had discovered. But it is necessary also to confess that the power of nature is so ample and vast, and these principles so simple and general, that I have hardly observed a single particular effect which I cannot at once recognize as capable of being deduced in many different modes from the principles, and that my greatest difficulty usually is to discover in which of these modes the effect is dependent upon them; for out of this difficulty I cannot otherwise extricate myself than by again seeking certain experiments, which may be such that their result is not the same, if it is in the one of these modes that we must explain it, as it would be if it were to be explained in the other. As to what remains, I am now in a position to discern, as I think, with sufficient clearness what course must be taken to make the majority of those experiments which may conduce to this end; but I perceive likewise that they are such and so numerous, that neither my hands nor my income, though it were a thousand times larger than it is, would be sufficient for them all; so that, according as henceforward I shall have the means of making more or fewer experiments, I shall in the same proportion make greater or less progress in the knowledge of nature. This was what I had hoped to make known by the Treatise I had written, and so clearly to exhibit the advantage that would thence accrue to the public, as to induce all who have the common good of man at heart, that is, all who are virtuous in truth, and not merely in appearance, or according to opinion, as well to communicate to me the experiments they had already made, as to assist me in those that remain to be made.

But since that time other reasons have occurred to me, by which I have been led to change my opinion, and to think that I ought indeed to go on committing to writing all the results which I deemed of any moment, as soon as I should have tested their truth, and to bestow the same care upon them as I would have done had it been my design to publish them. This course commended itself to me, as well because I thus afforded myself more ample inducement to examine them thoroughly, for doubtless that is always more narrowly scrutinized which we believe will be read by many, than that which is written merely for our private use (and frequently what has seemed to me true when I first conceived it, has appeared false when I have set about committing it to writing); as because I thus lost no opportunity of advancing the interests of the public, as far as in me lay, and since thus likewise if my writings possess any value, those into whose hands they may fall after my death may be able to put them to what use they deem proper. But I resolved by no means to consent to their publication during my lifetime, lest either the oppositions or the controversies to which they might give rise, or even the reputation, such as it might be, which they would acquire for me, should be any occasion of my losing the time that I had set apart for my own improvement. For though it be true that every one is bound to promote to the extent of his ability the good of others, and that to be useful to no one is really to be worthless, yet it is likewise true that our cares ought to extend beyond the present; and it is good to omit doing what might perhaps bring some profit to the living, when we have in view the accomplishment of other ends that will be of much greater advantage to posterity. And in truth, I am quite willing it should be known that the little I have hitherto learned is almost nothing in comparison with that of which I am ignorant, and to the knowledge of which I do not despair of being able to attain; for it is much the same with those who gradually discover truth in the Sciences, as with those who when growing rich find less difficulty in making great acquisitions, than they formerly experienced when poor in making acquisitions of much smaller amount. Or they may be compared to the commanders of armies, whose forces usually increase in proportion to their victories, and who need greater prudence to keep together the residue of their troops after a defeat than after a victory to take towns and provinces. For he truly engages in battle who endeavors to surmount all the difficulties and errors which prevent him from reaching the knowledge of truth, and he is overcome in fight who admits a false opinion touching a matter of any generality and importance, and he requires thereafter much more skill to recover his former position than to make great advances when once in possession of thoroughly ascertained principles. As for myself, if I have succeeded in discovering any truths in the Sciences (and I trust that what is contained in this volume* will show that I have found some), I can declare that they are but the consequences and results of five or six principal difficulties which I have surmounted, and my encounters with which I reckoned as battles in which victory declared for me. I will not hesitate even to avow my belief that nothing further is wanting to enable me fully to realize my designs than to gain two or three similar victories; and that I am not so far advanced in years but that, according to the ordinary course of nature, I may still have sufficient leisure for this end. But I conceive myself the more bound to husband the time that remains the greater my expectation of being able to employ it aright, and I should doubtless have much to rob me of it, were I to publish the principles of my Physics; for although they are almost all so evident that to assent to them no more is needed than simply to understand them, and although there is not one of them of which I do not expect to be able to give demonstration, yet, as it is impossible that they can be in accordance with all the diverse opinions of others, I foresee that I should frequently be turned aside from my grand design, on occasion of the opposition which they would be sure to awaken.

It may be said, that these oppositions would be useful both in making me aware of my errors, and, if my speculations contain anything of value, in bringing others to a fuller understanding of it; and still farther, as many can see better than one, in leading others who are now beginning to avail themselves of my principles, to assist me in turn with their discoveries. But though I recognize my extreme liability to error, and scarce ever trust to the first thoughts which occur to me, yet the experience I have had of possible objections to my views prevents me from anticipating any profit from them. For I have already had frequent proof of the judgments, as well of those I esteemed friends, as of some others to whom I thought I was an object of indifference, and even of some whose malignity and envy would, I knew, determine them to endeavor to discover what partiality concealed from the eyes of my friends. But it has rarely happened that anything has been objected to me which I had myself altogether overlooked, unless it were something far removed from the subject: so that I have never met with a single critic of my opinions who did not appear to me either less rigorous or less equitable than myself. And further, I have never observed that any truth before unknown has been brought to light by the disputations that are practiced in the Schools; for while each strives for the victory, each is much more occupied in making the best of mere verisimilitude, than in weighing the reasons on both sides of the question; and those who have been long good advocates are not afterward on that account the better judges.

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* The Discourse on Method was originally published along with the Dioptrics, the Meteorics, and the Geometry.

As for the advantage that others would derive from the communication of my thoughts, it could not be very great; because I have not yet so far prosecuted them as that much does not remain to be added before they can be applied to practice. And I think I may say without vanity, that if there is any one who can carry them out that length, it must be myself rather than another: not that there may not be in the world many minds incomparably superior to mine, but because one cannot so well seize a thing and make it one's own, when it has been learned from another, as when one has himself discovered it. And so true is this of the present subject that, though I have often explained some of my opinions to persons of much acuteness, who, whilst I was speaking, appeared to understand them very distinctly, yet, when they repeated them, I have observed that they almost always changed them to such an extent that I could no longer acknowledge them as mine. I am glad, by the way, to take this opportunity of requesting posterity never to believe on hearsay that anything has proceeded from me which has not been published by myself; and I am not at all astonished at the extravagances attributed to those ancient philosophers whose own writings we do not possess; whose thoughts, however, I do not on that account suppose to have been really absurd, seeing they were among the ablest men of their times, but only that these have been falsely represented to us. It is observable, accordingly, that scarcely in a single instance has any one of their disciples surpassed them; and I am quite sure that the most devoted of the present followers of Aristotle would think themselves happy if they had as much knowledge of nature as he possessed, were it even under the condition that they should never afterward attain to higher. In this respect they are like the ivy which never strives to rise above the tree that sustains it, and which frequently even returns downward when it has reached the top; for it seems to me that they also sink, in other words, render themselves less wise than they would be if they gave up study, who, not contented with knowing all that is intelligibly explained in their author, desire in addition to find in him the solution of many difficulties of which he says not a word, and never perhaps so much as thought. Their fashion of philosophizing, however, is well suited to persons whose abilities fall below mediocrity; for the obscurity of the distinctions and principles of which they make use enables them to speak of all things with as much confidence as if they really knew them, and to defend all that they say on any subject against the most subtle and skillful, without its being possible for anyone to convict them of error. In this they seem to me to be like a blind man, who, in order to fight on equal terms with a person that sees, should have made him descend to the bottom of an intensely dark cave: and I may say that such persons have an interest in my refraining from publishing the principles of the Philosophy of which I make use; for, since these are of a kind the simplest and most evident, I should, by publishing them, do much the same as if I were to throw open the windows, and allow the light of day to enter the cave into which the combatants had descended. But even superior men have no reason for any great anxiety to know these principles, for if what they desire is to be able to speak of all things, and to acquire a reputation for learning, they will gain their end more easily by remaining satisfied with the appearance of truth, which can be found without much difficulty in all sorts of matters, than by seeking the truth itself which unfolds itself but slowly and that only in some departments, while it obliges us, when we have to speak of others, freely to confess our ignorance. If, however, they prefer the knowledge of some few truths to the vanity of appearing ignorant of none, as such knowledge is undoubtedly much to be preferred, and, if they choose to follow a course similar to mine, they do not require for this that I should say anything more than I have already said in this Discourse. For if they are capable of making greater advancement than I have made, they will much more be able of themselves to discover all that I believe myself to have found; since as I have never examined aught except in order, it is certain that what yet remains to be discovered is in itself more difficult and recondite, than that which I have already been enabled to find, and the gratification would be much less in learning it from me than in discovering it for themselves. Besides this, the habit which they will acquire, by seeking first what is easy, and then passing onward slowly and step by step to the more difficult, will benefit them more than all my instructions. Thus, in my own case, I am persuaded that if I had been taught from my youth all the truths of which I have since sought out demonstrations, and had thus learned them without labor, I should never, perhaps, have known any beyond these; at least, I should never have acquired the habit and the facility which I think I possess in always discovering new truths in proportion as I give myself to the search. And, in a single word, if there is any work in the world which cannot be so well finished by another as by him who has commenced it, it is that at which I labor.

It is true, indeed, as regards the experiments which may conduce to this end, that one man is not equal to the task of making them all; but yet he can advantageously avail himself, in this work, of no hands besides his own, unless those of artisans, or parties of the same kind, whom he could pay, and whom the hope of gain (a means of great efficacy) might stimulate to accuracy in the performance of what was prescribed to them. For as to those who, through curiosity or a desire of learning, of their own accord, perhaps, offer him their services, besides that in general their promises exceed their performance, and that they sketch out fine designs of which not one is ever realized, they will, without doubt, expect to be compensated for their trouble by the explication of some difficulties, or, at least, by compliments and useless speeches, in which he cannot spend any portion of his time without loss to himself. And as for the experiments that others have already made, even although these parties should be willing of themselves to communicate them to him (which is what those who esteem them secrets will never do), the experiments are, for the most part, accompanied with so many circumstances and superfluous elements, as to make it exceedingly difficult to disentangle the truth from its adjuncts; besides, he will find almost all of them so ill described, or even so false (because those who made them have wished to see in them only such facts as they deemed comformable to their principles), that, if in the entire number there should be some of a nature suited to his purpose, still their value could not compensate for the time that would be necessary to make the selection. So that if there existed anyone whom we assuredly knew to be capable of making discoveries of the highest kind, and of the greatest possible utility to the public; and if all other men were therefore eager by all means to assist him in successfully prosecuting his designs, I do not see that they could do aught else for him beyond contributing to defray the expenses of the experiments that might be necessary; and for the rest, prevent his being deprived of his leisure by the unseasonable interruptions of anyone. But besides that I neither have so high an opinion of myself as to be willing to make promise of anything extraordinary, nor feed on imaginations so vain as to fancy that the public must be much interested in my designs; I do not, on the other hand, own a soul so mean as to be capable of accepting from anyone a favor of which it could be supposed that I was unworthy.

These considerations taken together were the reason why, for the last three years, I have been unwilling to publish the Treatise I had on hand, and why I even resolved to give publicity during my life to no other that was so general, or by which the principles of my Physics might be understood. But since then, two other reasons have come into operation that have determined me here to subjoin some particular specimens, and give the public some account of my doings and designs. Of these considerations, the first is, that if I failed to do so, many who were cognizant of my previous intention to publish some writings, might have imagined that the reasons which induced me to refrain from so doing, were less to my credit than they really are; for although I am not immoderately desirous of glory, or even, if I may venture so to say, although I am averse from it in so far as I deem it hostile to repose which I hold in greater account than aught else, yet, at the same time, I have never sought to conceal my actions as if they were crimes, nor made use of many precautions that I might remain unknown; and this partly because I should have thought such a course of conduct a wrong against myself, and partly because it would have occasioned me some sort of uneasiness which would again have been contrary to the perfect mental tranquillity which I court. And forasmuch as, while thus indifferent to the thought alike of fame or forgetfulness; I have yet been unable to prevent myself from acquiring some sort of reputation, I have thought it incumbent on me to do my best to save myself at least from being ill-spoken of. The other reason that has determined me to commit to writing these specimens of philosophy is, that I am becoming daily more and more alive to the delay which my design of self-instruction suffers, for want of the infinity of experiments I require, and which it is impossible for me to make without the assistance of others: and, without flattering myself so much as to expect the public to take a large share in my interests, I am yet unwilling to be found so far wanting in the duty I owe to myself, as to give occasion to those who shall survive me to make it matter of reproach against me some day, that I might have left them many things in a much more perfect state than I had done, had I not too much neglected to make them aware of the ways in which they could have promoted the accomplishment of my designs.

And I thought that it was easy for me to select some matters which should neither be obnoxious to much controversy, nor should compel me to expound more of my principles than I desired, and which should yet be sufficient clearly to exhibit what I can or cannot accomplish in the Sciences. Whether or not I have succeeded in this it is not for me to say; and I do not wish to forestall the judgments of others by speaking myself of my writings; but it will gratify me if they be examined, and, to afford the greater inducement to this, I request all who may have any objections to make to them, to take the trouble of forwarding these to my publisher, who will give me notice of them, that I may endeavor to subjoin at the same time my reply; and in this way readers seeing both at once will more easily determine where the truth lies: for I do not engage in any case to make prolix replies, but only with perfect frankness to avow my errors if I am convinced of them, or if I cannot perceive them, simply to state what I think is required for defense of the matters I have written, adding thereto no explication of any new matter that it may not be necessary to pass without end from one thing to another.

If some of the matters of which I have spoken in the beginning of the Dioptrics and Meteorics should offend at first sight, because I call them hypotheses and seem indifferent about giving proof of them, I request a patient and attentive reading of the whole, from which I hope those hesitating will derive satisfaction; for it appears to me that the reasonings are so mutually connected in these Treatises, that, as the last are demonstrated by the first which are their causes, the first are in their turn demonstrated by the last which are their effects. Nor must it be imagined that I here commit the fallacy which the logicians call a circle; for since experience renders the majority of these effects most certain, the causes from which I deduce them do not serve so much to establish their reality as to explain their existence; but on the contrary, the reality of the causes is established by the reality of the effects. Nor have I called them hypotheses with any other end in view except that it may be known that I think I am able to deduce them from those first truths which I have already expounded; and yet that I have expressly determined not to do so, to prevent a certain class of minds from thence taking occasion to build some extravagant Philosophy upon what they may take to be my principles, and my being blamed for it. I refer to those who imagine that they can master in a day all that another has taken twenty years to think out, as soon as he has spoken two or three words to them on the subject; or who are the more liable to error and the less capable of perceiving truth in very proportion as they are more subtle and lively. As to the opinions which are truly and wholly mine, I offer no apology for them as new, persuaded as I am that if their reasons be well considered they will be found to be so simple and so conformed to common sense as to appear less extraordinary and less paradoxical than any others which can be held on the same subjects; nor do I even boast of being the earliest discoverer of any of them, but only of having adopted them, neither because they had nor because they had not been held by others, but solely because Reason has convinced me of their truth.

Though artisans may not be able at once to execute the invention which is explained in the Dioptrics, I do not think that any one on that account is entitled to condemn it; for since address and practice are required in order so to make and adjust the machines described by me as not to overlook the smallest particular, I should not be less astonished if they succeeded on the first attempt than if a person were in one day to become an accomplished performer on the guitar, by merely having excellent sheets of music set up before him. And if I write in French, which is the language of my country, in preference to Latin, which is that of my preceptors, it is because I expect that those who make use of their unprejudiced natural Reason will be better judges of my opinions than those who give heed to the writings of the ancients only; and as for those who unite good sense with habits of study, whom alone I desire for judges, they will not, I feel assured, be so partial to Latin as to refuse to listen to my reasonings merely because I expound them in the vulgar Tongue.

In conclusion, I am unwilling here to say anything very specific of the progress which I expect to make for the future in the Sciences, or to bind myself to the public by any promise which I am not certain of being able to fulfil; but this only will I say, that I have resolved to devote what time I may still have to live to no other occupation than that of endeavoring to acquire some knowledge of Nature, which shall be of such a kind as to enable us therefrom to deduce rules in Medicine of greater certainty than those at present in use; and that my inclination is so much opposed to all other pursuits, especially to such as cannot be useful to some without being hurtful to others, that if, by any circumstances, I had been constrained to engage in such, I do not believe that I should have been able to succeed. Of this I here make a public declaration, though well aware that it cannot serve to procure for me any consideration in the world, which, however, I do not in the least affect; and I shall always hold myself more obliged to those through whose favor I am permitted to enjoy my retirement without interruption than to any who might offer me the highest earthly preferments.

THE MEDITATIONS

OF

DESCARTES

TRANSLATED FROM THE LATIN AND COLLATED
WITH THE FRENCH

TO

THE VERY SAGE AND ILLUSTRIOUS

THE

DEAN AND DOCTORS OF THE SACRED FACULTY OF THEOLOGY OF PARIS.

Gentlemen:—

The motive which impels me to present this Treatise to you is so reasonable, and when you shall learn its design, I am confident that you also will consider that there is ground so valid for your taking it under your protection, that I can in no way better recommend it to you than by briefly stating the end which I proposed to myself in it. I have always been of opinion that the two questions respecting God and the Soul, were the chief of those that ought to be determined by help of Philosophy rather than of Theology; for although to us, the faithful, it be sufficient to hold as matters of faith, that the human soul does not perish with the body, and that God exists, it yet assuredly seems impossible ever to persuade infidels of the reality of any religion, or almost even any moral virtue, unless, first of all, those two things be proved to them by natural reason. And since in this life there are frequently greater rewards held out to vice than to virtue, few would prefer the right to the useful, if they were restrained neither by the fear of God nor the expectation of another life; and although it is quite true that the existence of God is to be believed since it is taught in the sacred Scriptures, and that, on the other hand, the sacred Scriptures are to be believed because they come from God (for since faith is a gift of God, the same Being who bestows grace to enable us to believe other things, can likewise impart of it to enable us to believe his own existence), nevertheless, this cannot be submitted to infidels, who would consider that the reasoning proceeded in a circle. And, indeed, I have observed that you, with all the other theologians, not only affirmed the sufficiency of natural reason for the proof of the existence of God, but also, that it may be inferred from sacred Scripture, that the knowledge of God is much clearer than of many created things, and that it is really so easy of acquisition as to leave those who do not possess it blame-worthy. This is manifest from these words of the Book of Wisdom, chap. xiii., where it is said, HOWBEIT THEY ARE NOT TO BE EXCUSED; FOR IF THEIR UNDERSTANDING WAS SO GREAT THAT THEY COULD DISCERN THE WORLD AND THE CREATURES, WHY DID THEY NOT RATHER FIND OUT THE LORD THEREOF? And in Romans, chap. i., it is said that they are WITHOUT EXCUSE; and again, in the same place, by these words, THAT WHICH MAY BE KNOWN OF GOD IS MANIFEST IN THEM—we seem to be admonished that all which can be known of God may be made manifest by reasons obtained from no other source than the inspection of our own minds. I have, therefore, thought that it would not be unbecoming in me to inquire how and by what way, without going out of ourselves, God may be more easily and certainly known than the things of the world.

And as regards the Soul, although many have judged that its nature could not be easily discovered, and some have even ventured to say that human reason led to the conclusion that it perished with the body, and that the contrary opinion could be held through faith alone; nevertheless, since the Lateran Council, held under Leo X. (in session viii.), condemns these, and expressly enjoins Christian philosophers to refute their arguments, and establish the truth according to their ability, I have ventured to attempt it in this work. Moreover, I am aware that most of the irreligious deny the existence of God, and the distinctness of the human soul from the body, for no other reason than because these points, as they allege, have never as yet been demonstrated. Now, although I am by no means of their opinion, but, on the contrary, hold that almost all the proofs which have been adduced on these questions by great men, possess, when rightly understood, the force of demonstrations, and that it is next to impossible to discover new, yet there is, I apprehend, no more useful service to be performed in Philosophy, than if some one were, once for all, carefully to seek out the best of these reasons, and expound them so accurately and clearly that, for the future, it might be manifest to all that they are real demonstrations. And finally, since many persons were greatly desirous of this, who knew that I had cultivated a certain Method of resolving all kinds of difficulties in the sciences, which is not indeed new (there being nothing older than truth), but of which they were aware I had made successful use in other instances, I judged it to be my duty to make trial of it also on the present matter.

Now the sum of what I have been able to accomplish on the subject is contained in this Treatise. Not that I here essayed to collect all the diverse reasons which might be adduced as proofs on this subject, for this does not seem to be necessary, unless on matters where no one proof of adequate certainty is to be had; but I treated the first and chief alone in such a manner that I should venture now to propose them as demonstrations of the highest certainty and evidence. And I will also add that they are such as to lead me to think that there is no way open to the mind of man by which proofs superior to them can ever be discovered; for the importance of the subject, and the glory of God, to which all this relates, constrain me to speak here somewhat more freely of myself than I have been accustomed to do. Nevertheless, whatever certitude and evidence I may find in these demonstrations, I cannot therefore persuade myself that they are level to the comprehension of all. But just as in geometry there are many of the demonstrations of Archimedes, Apollonius, Pappus, and others, which, though received by all as evident even and certain (because indeed they manifestly contain nothing which, considered by itself, it is not very easy to understand, and no consequents that are inaccurately related to their antecedents), are nevertheless understood by a very limited number, because they are somewhat long, and demand the whole attention of the reader: so in the same way, although I consider the demonstrations of which I here make use, to be equal or even superior to the geometrical in certitude and evidence, I am afraid, nevertheless, that they will not be adequately understood by many, as well because they also are somewhat long and involved, as chiefly because they require the mind to be entirely free from prejudice, and able with ease to detach itself from the commerce of the senses. And, to speak the truth, the ability for metaphysical studies is less general than for those of geometry. And, besides, there is still this difference that, as in geometry, all are persuaded that nothing is usually advanced of which there is not a certain demonstration, those but partially versed in it err more frequently in assenting to what is false, from a desire of seeming to understand it, than in denying what is true. In philosophy, on the other hand, where it is believed that all is doubtful, few sincerely give themselves to the search after truth, and by far the greater number seek the reputation of bold thinkers by audaciously impugning such truths as are of the greatest moment.

Hence it is that, whatever force my reasonings may possess, yet because they belong to philosophy, I do not expect they will have much effect on the minds of men, unless you extend to them your patronage and approval. But since your Faculty is held in so great esteem by all, and since the name of SORBONNE is of such authority, that not only in matters of faith, but even also in what regards human philosophy, has the judgment of no other society, after the Sacred Councils, received so great deference, it being the universal conviction that it is impossible elsewhere to find greater perspicacity and solidity, or greater wisdom and integrity in giving judgment, I doubt not, if you but condescend to pay so much regard to this Treatise as to be willing, in the first place, to correct it (for mindful not only of my humanity, but chiefly also of my ignorance, I do not affirm that it is free from errors); in the second place, to supply what is wanting in it, to perfect what is incomplete, and to give more ample illustration where it is demanded, or at least to indicate these defects to myself that I may endeavor to remedy them; and, finally, when the reasonings contained in it, by which the existence of God and the distinction of the human soul from the body are established, shall have been brought to such degree of perspicuity as to be esteemed exact demonstrations, of which I am assured they admit, if you condescend to accord them the authority of your approbation, and render a public testimony of their truth and certainty, I doubt not, I say, but that henceforward all the errors which have ever been entertained on these questions will very soon be effaced from the minds of men. For truth itself will readily lead the remainder of the ingenious and the learned to subscribe to your judgment; and your authority will cause the atheists, who are in general sciolists rather than ingenious or learned, to lay aside the spirit of contradiction, and lead them, perhaps, to do battle in their own persons for reasonings which they find considered demonstrations by all men of genius, lest they should seem not to understand them; and, finally, the rest of mankind will readily trust to so many testimonies, and there will no longer be any one who will venture to doubt either the existence of God or the real distinction of mind and body. It is for you, in your singular wisdom, to judge of the importance of the establishment of such beliefs, [who are cognizant of the disorders which doubt of these truths produces].* But it would not here become me to commend at greater length the cause of God and of religion to you, who have always proved the strongest support of the Catholic Church.

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* The SQUARE brackets, here and throughout the volume, are used to mark additions to the original of the revised French translation.

PREFACE TO THE READER.

I have already slightly touched upon the questions respecting the existence of God and the nature of the human soul, in the « Discourse on the Method of rightly conducting the Reason, and seeking Truth in the Sciences,» published in French in the year 1637; not however, with the design of there treating of them fully, but only, as it were, in passing, that I might learn from the judgment of my readers in what way I should afterward handle them; for these questions appeared to me to be of such moment as to be worthy of being considered more than once, and the path which I follow in discussing them is so little trodden, and so remote from the ordinary route that I thought it would not be expedient to illustrate it at greater length in French, and in a discourse that might be read by all, lest even the more feeble minds should believe that this path might be entered upon by them.

But, as in the « Discourse on Method,» I had requested all who might find aught meriting censure in my writings, to do me the favor of pointing it out to me, I may state that no objections worthy of remark have been alleged against what I then said on these questions except two, to which I will here briefly reply, before undertaking their more detailed discussion.

The first objection is that though, while the human mind reflects on itself, it does not perceive that it is any other than a thinking thing, it does not follow that its nature or essence consists only in its being a thing which thinks; so that the word ONLY shall exclude all other things which might also perhaps be said to pertain to the nature of the mind.

To this objection I reply, that it was not my intention in that place to exclude these according to the order of truth in the matter (of which I did not then treat), but only according to the order of thought (perception); so that my meaning was, that I clearly apprehended nothing, so far as I was conscious, as belonging to my essence, except that I was a thinking thing, or a thing possessing in itself the faculty of thinking. But I will show hereafter how, from the consciousness that nothing besides thinking belongs to the essence of the mind, it follows that nothing else does in truth belong to it.

The second objection is that it does not follow, from my possessing the idea of a thing more perfect than I am, that the idea itself is more perfect than myself, and much less that what is represented by the idea exists.

But I reply that in the term IDEA there is here something equivocal; for it may be taken either materially for an act of the understanding, and in this sense it cannot be said to be more perfect than I, or objectively, for the thing represented by that act, which, although it be not supposed to exist out of my understanding, may, nevertheless, be more perfect than myself, by reason of its essence. But, in the sequel of this treatise I will show more amply how, from my possessing the idea of a thing more perfect than myself, it follows that this thing really exists.

Besides these two objections, I have seen, indeed, two treatises of sufficient length relating to the present matter. In these, however, my conclusions, much more than my premises, were impugned, and that by arguments borrowed from the common places of the atheists. But, as arguments of this sort can make no impression on the minds of those who shall rightly understand my reasonings, and as the judgments of many are so irrational and weak that they are persuaded rather by the opinions on a subject that are first presented to them, however false and opposed to reason they may be, than by a true and solid, but subsequently received, refutation of them, I am unwilling here to reply to these strictures from a dread of being, in the first instance, obliged to state them.

I will only say, in general, that all which the atheists commonly allege in favor of the non-existence of God, arises continually from one or other of these two things, namely, either the ascription of human affections to Deity, or the undue attribution to our minds of so much vigor and wisdom that we may essay to determine and comprehend both what God can and ought to do; hence all that is alleged by them will occasion us no difficulty, provided only we keep in remembrance that our minds must be considered finite, while Deity is incomprehensible and infinite.

Now that I have once, in some measure, made proof of the opinions of men regarding my work, I again undertake to treat of God and the human soul, and at the same time to discuss the principles of the entire First Philosophy, without, however, expecting any commendation from the crowd for my endeavors, or a wide circle of readers. On the contrary, I would advise none to read this work, unless such as are able and willing to meditate with me in earnest, to detach their minds from commerce with the senses, and likewise to deliver themselves from all prejudice; and individuals of this character are, I well know, remarkably rare. But with regard to those who, without caring to comprehend the order and connection of the reasonings, shall study only detached clauses for the purpose of small but noisy criticism, as is the custom with many, I may say that such persons will not profit greatly by the reading of this treatise; and although perhaps they may find opportunity for cavilling in several places, they will yet hardly start any pressing objections, or such as shall be deserving of reply.

But since, indeed, I do not promise to satisfy others on all these subjects at first sight, nor arrogate so much to myself as to believe that I have been able to forsee all that may be the source of difficulty to each one, I shall expound, first of all, in the MEDITATIONS, those considerations by which I feel persuaded that I have arrived at a certain and evident knowledge of truth, in order that I may ascertain whether the reasonings which have prevailed with myself will also be effectual in convincing others. I will then reply to the objections of some men, illustrious for their genius and learning, to whom these Meditations were sent for criticism before they were committed to the press; for these objections are so numerous and varied that I venture to anticipate that nothing, at least nothing of any moment, will readily occur to any mind which has not been touched upon in them.

Hence it is that I earnestly entreat my readers not to come to any judgment on the questions raised in the Meditations until they have taken care to read the whole of the Objections, with the relative Replies.

SYNOPSIS

OF THE

SIX FOLLOWING MEDITATIONS.

In the First Meditation I expound the grounds on which we may doubt in general of all things, and especially of material objects, so long at least, as we have no other foundations for the sciences than those we have hitherto possessed. Now, although the utility of a doubt so general may not be manifest at first sight, it is nevertheless of the greatest, since it delivers us from all prejudice, and affords the easiest pathway by which the mind may withdraw itself from the senses; and finally makes it impossible for us to doubt wherever we afterward discover truth.

In the Second, the mind which, in the exercise of the freedom peculiar to itself, supposes that no object is, of the existence of which it has even the slightest doubt, finds that, meanwhile, it must itself exist. And this point is likewise of the highest moment, for the mind is thus enabled easily to distinguish what pertains to itself, that is, to the intellectual nature, from what is to be referred to the body. But since some, perhaps, will expect, at this stage of our progress, a statement of the reasons which establish the doctrine of the immortality of the soul, I think it proper here to make such aware, that it was my aim to write nothing of which I could not give exact demonstration, and that I therefore felt myself obliged to adopt an order similar to that in use among the geometers, viz, to premise all upon which the proposition in question depends, before coming to any conclusion respecting it. Now, the first and chief prerequisite for the knowledge of the immortality of the soul is our being able to form the clearest possible conception (*conceptus*—concept) of the soul itself, and such as shall be absolutely distinct from all our notions of body; and how this is to be accomplished is there shown. There is required, besides this, the assurance that all objects which we clearly and distinctly think are true (really exist) in that very mode in which we think them; and this could not be established previously to the Fourth Meditation. Farther, it is necessary, for the same purpose, that we possess a distinct conception of corporeal nature, which is given partly in the Second and partly in the Fifth and Sixth Meditations. And, finally, on these grounds, we are necessitated to conclude, that all those objects which are clearly and distinctly conceived to be diverse substances, as mind and body, are substances really reciprocally distinct; and this inference is made in the Sixth Meditation. The absolute distinction of mind and body is, besides, confirmed in this Second Meditation, by showing that we cannot conceive body unless as divisible; while, on the other hand, mind cannot be conceived unless as indivisible. For we are not able to conceive the half of a mind, as we can of any body, however small, so that the natures of these two substances are to be held, not only as diverse, but even in some measure as contraries. I have not, however, pursued this discussion further in the present treatise, as well for the reason that these considerations are sufficient to show that the destruction of the mind does not follow from the corruption of the body, and thus to afford to men the hope of a future life, as also because the premises from which it is competent for us to infer the immortality of the soul, involve an explication of the whole principles of Physics: in order to establish, in the first place, that generally all substances, that is, all things which can exist only in consequence of having been created by God, are in their own nature incorruptible, and can never cease to be, unless God himself, by refusing his concurrence to them, reduce them to nothing; and, in the second place, that body, taken generally, is a substance, and therefore can never perish, but that the human body, in as far as it differs from other bodies, is constituted only by a certain configuration of members, and by other accidents of this sort, while the human mind is not made up of accidents, but is a pure substance. For although all the accidents of the mind be changed—although, for example, it think certain things, will others, and perceive others, the mind itself does not vary with these changes; while, on the contrary, the human body is no longer the same if a change take place in the form of any of its parts: from which it follows that the body may, indeed, without difficulty perish, but that the mind is in its own nature immortal.

In the Third Meditation, I have unfolded at sufficient length, as appears to me, my chief argument for the existence of God. But yet, since I was there desirous to avoid the use of comparisons taken from material objects, that I might withdraw, as far as possible, the minds of my readers from the senses, numerous obscurities perhaps remain, which, however, will, I trust, be afterward entirely removed in the Replies to the Objections: thus among other things, it may be difficult to understand how the idea of a being absolutely perfect, which is found in our minds, possesses so much objective reality [*i. e.*, participates by representation in so many degrees of being and perfection] that it must be held to arise from a cause absolutely perfect. This is illustrated in the Replies by the comparison of a highly perfect machine, the idea of which exists in the mind of some workman; for as the objective (*i.e.*, representative) perfection of this idea must have some cause, viz, either the science of the workman, or of some other person from whom he has received the idea, in the same way the idea of God, which is found in us, demands God himself for its cause.

In the Fourth, it is shown that all which we clearly and distinctly perceive (apprehend) is true; and, at the same time, is explained wherein consists the nature of error; points that require to be known as well for confirming the preceding truths, as for the better understanding of those that are to follow. But, meanwhile, it must be observed, that I do not at all there treat of Sin, that is, of error committed in the pursuit of good and evil, but of that sort alone which arises in the determination of the true and the false. Nor do I refer to matters of faith, or to the conduct of life, but only to what regards speculative truths, and such as are known by means of the natural light alone.

In the Fifth, besides the illustration of corporeal nature, taken generically, a new demonstration is given of the existence of God, not free, perhaps, any more than the former, from certain difficulties, but of these the solution will be found in the Replies to the Objections. I further show, in what sense it is true that the certitude of geometrical demonstrations themselves is dependent on the knowledge of God.

Finally, in the Sixth, the act of the understanding (*intellectio*) is distinguished from that of the imagination (*imaginatio*); the marks of this distinction are described; the human mind is shown to be really distinct from the body, and, nevertheless, to be so closely conjoined therewith, as together to form, as it were, a unity. The whole of the errors which arise from the senses are brought under review, while the means of avoiding them are pointed out; and, finally, all the grounds are adduced from which the existence of material objects may be inferred; not, however, because I deemed them of great utility in establishing what they prove, viz, that there is in reality a world, that men are possessed of bodies, and the like, the truth of which no one of sound mind ever seriously doubted; but because, from a close consideration of them, it is perceived that they are neither so strong nor clear as the reasonings which conduct us to the knowledge of our mind and of God; so that the latter are, of all which come under human knowledge, the most certain and manifest — a conclusion which it was my single aim in these Meditations to establish; on which account I here omit mention of the various other questions which, in the course of the discussion, I had occasion likewise to consider.

MEDITATIONS

ON

THE FIRST PHILOSOPHY

IN WHICH

THE EXISTENCE OF GOD, AND THE REAL DISTINCTION
OF MIND AND BODY, ARE DEMONSTRATED.

MEDITATION I.

Of the Things on Which We May Doubt.

Several years have now elapsed since I first became aware that I had accepted, even from my youth, many false opinions for true, and that consequently what I afterward based on such principles was highly doubtful; and from that time I was convinced of the necessity of undertaking once in my life to rid myself of all the opinions I had adopted, and of commencing anew the work of building from the foundation, if I desired to establish a firm and abiding superstructure in the sciences. But as this enterprise appeared to me to be one of great magnitude, I waited until I had attained an age so mature as to leave me no hope that at any stage of life more advanced I should be better able to execute my design. On this account, I have delayed so long that I should henceforth consider I was doing wrong were I still to consume in deliberation any of the time that now remains for action. To-day, then, since I have opportunely freed my mind from all cares [and am happily disturbed by no passions], and since I am in the secure possession of leisure in a peaceable retirement, I will at length apply myself earnestly and freely to the general overthrow of all my former opinions. But, to this end, it will not be necessary for me to show that the whole of these are false — a point, perhaps, which I shall never reach; but as even now my reason convinces me that I ought not the less carefully to withhold belief from what is not entirely certain and indubitable, than from what is manifestly false, it will be sufficient to justify the rejection of the whole if I shall find in each some ground for doubt. Nor for this purpose will it be necessary even to deal with each belief individually, which would be truly an endless labor; but, as the removal from below of the foundation necessarily involves the downfall of the whole edifice, I will at once approach the criticism of the principles on which all my former beliefs rested.

All that I have, up to this moment, accepted as possessed of the highest truth and certainty, I received either from or through the senses. I observed, however, that these sometimes misled us; and it is the part of prudence not to place absolute confidence in that by which we have even once been deceived.

But it may be said, perhaps, that, although the senses occasionally mislead us respecting minute objects, and such as are so far removed from us as to be beyond the reach of close observation, there are yet many other of their informations (presentations), of the truth of which it is manifestly impossible to doubt; as for example, that I am in this place, seated by the fire, clothed in a winter dressing gown, that I hold in my hands this piece of paper, with other intimations of the same nature. But how could I deny that I possess these hands and this body, and withal escape being classed with persons in a state of insanity, whose brains are so disordered and clouded by dark bilious vapors as to cause them pertinaciously to assert that they are monarchs when they are in the greatest poverty; or clothed [in gold] and purple when destitute of any covering; or that their head is made of clay, their body of glass, or that they are gourds? I should certainly be not less insane than they, were I to regulate my procedure according to examples so extravagant.

Though this be true, I must nevertheless here consider that I am a man, and that, consequently, I am in the habit of sleeping, and representing to myself in dreams those same things, or even sometimes others less probable, which the insane think are presented to them in their waking moments. How often have I dreamt that I was in these familiar circumstances, that I was dressed, and occupied this place by the fire, when I was lying undressed in bed? At the present moment, however, I certainly look upon this paper with eyes wide awake; the head which I now move is not asleep; I extend this hand consciously and with express purpose, and I perceive it; the occurrences in sleep are not so distinct as all this. But I cannot forget that, at other times I have been deceived in sleep by similar illusions; and, attentively considering those cases, I perceive so clearly that there exist no certain marks by which the state of waking can ever be distinguished from sleep, that I feel greatly astonished; and in amazement I almost persuade myself that I am now dreaming.

Let us suppose, then, that we are dreaming, and that all these particulars — namely, the opening of the eyes, the motion of the head, the forth-putting of the hands — are merely illusions; and even that we really possess neither an entire body nor hands such as we see. Nevertheless it must be admitted at least that the objects which appear to us in sleep are, as it were, painted representations which could not have been formed unless in the likeness of realities; and, therefore, that those general objects, at all events, namely, eyes, a head, hands, and an entire body, are not simply imaginary, but really existent. For, in truth, painters themselves, even when they study to represent sirens and satyrs by forms the most fantastic and extraordinary, cannot bestow upon them natures absolutely new, but can only make a certain medley of the members of different animals; or if they chance to imagine something so novel that nothing at all similar has ever been seen before, and such as is, therefore, purely fictitious and absolutely false, it is at least certain that the colors of which this is composed are real.

And on the same principle, although these general objects, viz, [a body], eyes, a head, hands, and the like, be imaginary, we are nevertheless absolutely necessitated to admit the reality at least of some other objects still more simple and universal than these, of which, just as of certain real colors, all those images of things, whether true and real, or false and fantastic, that are found in our consciousness (*cogitatio*), are formed.

To this class of objects seem to belong corporeal nature in general and its extension; the figure of extended things, their quantity or magnitude, and their number, as also the place in, and the time during, which they exist, and other things of the same sort. We will not, therefore, perhaps reason illegitimately if we conclude from this that Physics, Astronomy, Medicine, and all the other sciences that have for their end the consideration of composite objects, are indeed of a doubtful character; but that Arithmetic, Geometry, and the other sciences of the same class, which regard merely the simplest and most general objects, and scarcely inquire whether or not these are really existent, contain somewhat that is certain and indubitable: for whether I am awake or dreaming, it remains true that two and three make five, and that a square has but four sides; nor does it seem possible that truths so apparent can ever fall under a suspicion of falsity [or incertitude].

Nevertheless, the belief that there is a God who is all powerful, and who created me, such as I am, has, for a long time, obtained steady possession of my mind. How, then, do I know that he has not arranged that there should be neither earth, nor sky, nor any extended thing, nor figure, nor magnitude, nor place, providing at the same time, however, for [the rise in me of the perceptions of all these objects, and] the persuasion that these do not exist otherwise than as I perceive them? And further, as I sometimes think that others are in error respecting matters of which they believe themselves to possess a perfect knowledge, how do I know that I am not also deceived each time I add together two and three, or number the sides of a square, or form some judgment still more simple, if more simple indeed can be imagined? But perhaps Deity has not been willing that I should be thus deceived, for he is said to be supremely good. If, however, it were repugnant to the goodness of Deity to have created me subject to constant deception, it would seem likewise to be contrary to his goodness to allow me to be occasionally deceived; and yet it is clear that this is permitted. Some, indeed, might perhaps be found who would be disposed rather to deny the existence of a Being so powerful than to believe that there is nothing certain. But let us for the present refrain from opposing this opinion, and grant that all which is here said of a Deity is fabulous: nevertheless, in whatever way it be supposed that I reach the state in which I exist, whether by fate, or chance, or by an endless series of antecedents and consequents, or by any other means, it is clear (since to be deceived and to err is a certain defect) that the probability of my being so imperfect as to be the constant victim of deception, will be increased exactly in proportion as the power possessed by the cause, to which they assign my origin, is lessened. To these reasonings I have assuredly nothing to reply, but am constrained at last to avow that there is nothing of all that I formerly believed to be true of which it is impossible to doubt, and that not through thoughtlessness or levity, but from cogent and maturely considered reasons; so that henceforward, if I desire to discover anything certain, I ought not the less carefully to refrain from assenting to those same opinions than to what might be shown to be manifestly false.

But it is not sufficient to have made these observations; care must be taken likewise to keep them in remembrance. For those old and customary opinions perpetually recur—long and familiar usage giving them the right of occupying my mind, even almost against my will, and subduing my belief; nor will I lose the habit of deferring to them and confiding in them so long as I shall consider them to be what in truth they are, viz, opinions to some extent doubtful, as I have already shown, but still highly probable, and such as it is much more reasonable to believe than deny. It is for this reason I am persuaded that I shall not be doing wrong, if, taking an opposite judgment of deliberate design, I become my own deceiver, by supposing, for a time, that all those opinions are entirely false and imaginary, until at length, having thus balanced my old by my new prejudices, my judgment shall no longer be turned aside by perverted usage from the path that may conduct to the perception of truth. For I am assured that, meanwhile, there will arise neither peril nor error from this course, and that I cannot for the present yield too much to distrust, since the end I now seek is not action but knowledge.

I will suppose, then, not that Deity, who is sovereignly good and the fountain of truth, but that some malignant demon, who is at once exceedingly potent and deceitful, has employed all his artifice to deceive me; I will suppose that the sky, the air, the earth, colors, figures, sounds, and all external things, are nothing better than the illusions of dreams, by means of which this being has laid snares for my credulity; I will consider myself as without hands, eyes, flesh, blood, or any of the senses, and as falsely believing that I am possessed of these; I will continue resolutely fixed in this belief, and if indeed by this means it be not in my power to arrive at the knowledge of truth, I shall at least do what is in my power, viz [suspend my judgment], and guard with settled purpose against giving my assent to what is false, and being imposed upon by this deceiver, whatever be his power and artifice.

But this undertaking is arduous, and a certain indolence insensibly leads me back to my ordinary course of life; and just as the captive, who, perchance, was enjoying in his dreams an imaginary liberty, when he begins to suspect that it is but a vision, dreads awakening, and conspires with the agreeable illusions that the deception may be prolonged; so I, of my own accord, fall back into the train of my former beliefs, and fear to arouse myself from my slumber, lest the time of laborious wakefulness that would succeed this quiet rest, in place of bringing any light of day, should prove inadequate to dispel the darkness that will arise from the difficulties that have now been raised.

MEDITATION II.

Of the Nature of the Human Mind; and that It is More Easily Known than the Body.

The Meditation of yesterday has filled my mind with so many doubts, that it is no longer in my power to forget them. Nor do I see, meanwhile, any principle on which they can be resolved; and, just as if I had fallen all of a sudden into very deep water, I am so greatly disconcerted as to be unable either to plant my feet firmly on the bottom or sustain myself by swimming on the surface. I will, nevertheless, make an effort, and try anew the same path on which I had entered yesterday, that is, proceed by casting aside all that admits of the slightest doubt, not less than if I had discovered it to be absolutely false; and I will continue always in this track until I shall find something that is certain, or at least, if I can do nothing more, until I shall know with certainty that there is nothing certain. Archimedes, that he might transport the entire globe from the place it occupied to another, demanded only a point that was firm and immovable; so, also, I shall be entitled to entertain the highest expectations, if I am fortunate enough to discover only one thing that is certain and indubitable.

I suppose, accordingly, that all the things which I see are false (fictitious); I believe that none of those objects which my fallacious memory represents ever existed; I suppose that I possess no senses; I believe that body, figure, extension, motion, and place are merely fictions of my mind. What is there, then, that can be esteemed true? Perhaps this only, that there is absolutely nothing certain.

But how do I know that there is not something different altogether from the objects I have now enumerated, of which it is impossible to entertain the slightest doubt? Is there not a God, or some being, by whatever name I may designate him, who causes these thoughts to arise in my mind? But why suppose such a being, for it may be I myself am capable of producing them? Am I, then, at least not something? But I before denied that I possessed senses or a body; I hesitate, however, for what follows from that? Am I so dependent on the body and the senses that without these I cannot exist? But I had the persuasion that there was absolutely nothing in the world, that there was no sky and no earth, neither minds nor bodies; was I not, therefore, at the same time, persuaded that I did not exist? Far from it; I assuredly existed, since I was persuaded. But there is I know not what being, who is possessed at once of the highest power and the deepest cunning, who is constantly employing all his ingenuity in deceiving me.

Doubtless, then, I exist, since I am deceived; and, let him deceive me as he may, he can never bring it about that I am nothing, so long as I shall be conscious that I am something. So that it must, in fine, be maintained, all things being maturely and carefully considered, that this proposition (*pronunciatum*) I am, I exist, is necessarily true each time it is expressed by me, or conceived in my mind.

But I do not yet know with sufficient clearness what I am, though assured that I am; and hence, in the next place, I must take care, lest perchance I inconsiderately substitute some other object in room of what is properly myself, and thus wander from truth, even in that knowledge (cognition) which I hold to be of all others the most certain and evident. For this reason, I will now consider anew what I formerly believed myself to be, before I entered on the present train of thought; and of my previous opinion I will retrench all that can in the least be invalidated by the grounds of doubt I have adduced, in order that there may at length remain nothing but what is certain and indubitable. What then did I formerly think I was? Undoubtedly I judged that I was a man. But what is a man? Shall I say a rational animal? Assuredly not; for it would be necessary forthwith to inquire into what is meant by animal, and what by rational, and thus, from a single question, I should insensibly glide into others, and these more difficult than the first; nor do I now possess enough of leisure to warrant me in wasting my time amid subtleties of this sort. I prefer here to attend to the thoughts that sprung up of themselves in my mind, and were inspired by my own nature alone, when I applied myself to the consideration of what I was. In the first place, then, I thought that I possessed a countenance, hands, arms, and all the fabric of members that appears in a corpse, and which I called by the name of body. It further occurred to me that I was nourished, that I walked, perceived, and thought, and all those actions I referred to the soul; but what the soul itself was I either did not stay to consider, or, if I did, I imagined that it was something extremely rare and subtile, like wind, or flame, or ether, spread through my grosser parts. As regarded the body, I did not even doubt of its nature, but thought I distinctly knew it, and if I had wished to describe it according to the notions I then entertained, I should have explained myself in this manner: By body I understand all that can be terminated by a certain figure; that can be comprised in a certain place, and so fill a certain space as therefrom to exclude every other body; that can be perceived either by touch, sight, hearing, taste, or smell; that can be moved in different ways, not indeed of itself, but by something foreign to it by which it is touched [and from which it receives the impression]; for the power of self-motion, as likewise that of perceiving and thinking, I held as by no means pertaining to the nature of body; on the contrary, I was somewhat astonished to find such faculties existing in some bodies.

But [as to myself, what can I now say that I am], since I suppose there exists an extremely powerful, and, if I may so speak, malignant being, whose whole endeavors are directed toward deceiving me? Can I affirm that I possess any one of all those attributes of which I have lately spoken as belonging to the nature of body? After attentively considering them in my own mind, I find none of them that can properly be said to belong to myself. To recount them were idle and tedious. Let us pass, then, to the attributes of the soul. The first mentioned were the powers of nutrition and walking; but, if it be true that I have no body, it is true likewise that I am capable neither of walking nor of being nourished. Perception is another attribute of the soul; but perception too is impossible without the body; besides, I have frequently, during sleep, believed that I perceived objects which I afterward observed I did not in reality perceive. Thinking is another attribute of the soul; and here I discover what properly belongs to myself. This alone is inseparable from me. I am — I exist: this is certain; but how often? As often as I think; for perhaps it would even happen, if I should wholly cease to think, that I should at the same time altogether cease to be. I now admit nothing that is not necessarily true. I am therefore, precisely speaking, only a thinking thing, that is, a mind (*mens sive animus*), understanding, or reason, terms whose signification was before unknown to me. I am, however, a real thing, and really existent; but what thing? The answer was, a thinking thing. The question now arises, am I aught besides? I will stimulate my imagination with a view to discover whether I am not still something more than a thinking being. Now it is plain I am not the assemblage of members called the human body; I am not a thin and penetrating air diffused through all these members, or wind, or flame, or vapor, or breath, or any of all the things I can imagine; for I supposed that all these were not, and, without changing the supposition, I find that I still feel assured of my existence.

But it is true, perhaps, that those very things which I suppose to be non-existent, because they are unknown to me, are not in truth different from myself whom I know. This is a point I cannot determine, and do not now enter into any dispute regarding it. I can only judge of things that are known to me: I am conscious that I exist, and I who know that I exist inquire into what I am. It is, however, perfectly certain that the knowledge of my existence, thus precisely taken, is not dependent on things, the existence of which is as yet unknown to me: and consequently it is not dependent on any of the things I can feign in imagination. Moreover, the phrase itself, I frame an image (*effingo*), reminds me of my error; for I should in truth frame one if I were to imagine myself to be anything, since to imagine is nothing more than to contemplate the figure or image of a corporeal thing; but I already know that I exist, and that it is possible at the same time that all those images, and in general all that relates to the nature of body, are merely dreams [or chimeras]. From this I discover that it is not more reasonable to say, I will excite my imagination that I may know more distinctly what I am, than to express myself as follows: I am now awake, and perceive something real; but because my preception is not sufficiently clear, I will of express purpose go to sleep that my dreams may represent to me the object of my perception with more truth and clearness. And, therefore, I know that nothing of all that I can embrace in imagination belongs to the knowledge which I have of myself, and that there is need to recall with the utmost care the mind from this mode of thinking, that it may be able to know its own nature with perfect distinctness.

But what, then, am I? A thinking thing, it has been said. But what is a thinking thing? It is a thing that doubts, understands, [conceives], affirms, denies, wills, refuses; that imagines also, and perceives. Assuredly it is not little, if all these properties belong to my nature. But why should they not belong to it? Am I not that very being who now doubts of almost everything; who, for all that, understands and conceives certain things; who affirms one alone as true, and denies the others; who desires to know more of them, and does not wish to be deceived; who imagines many things, sometimes even despite his will; and is likewise percipient of many, as if through the medium of the senses. Is there nothing of all this as true as that I am, even although I should be always dreaming, and although he who gave me being employed all his ingenuity to deceive me? Is there also any one of these attributes that can be properly distinguished from my thought, or that can be said to be separate from myself? For it is of itself so evident that it is I who doubt, I who understand, and I who desire, that it is here unnecessary to add anything by way of rendering it more clear. And I am as certainly the same being who imagines; for although it may be (as I before supposed) that nothing I imagine is true, still the power of imagination does not cease really to exist in me and to form part of my thought. In fine, I am the same being who perceives, that is, who apprehends certain objects as by the organs of sense, since, in truth, I see light, hear a noise, and feel heat. But it will be said that these presentations are false, and that I am dreaming. Let it be so. At all events it is certain that I seem to see light, hear a noise, and feel heat; this cannot be false, and this is what in me is properly called perceiving (*sentire*), which is nothing else than thinking. From this I begin to know what I am with somewhat greater clearness and distinctness than heretofore.

But, nevertheless, it still seems to me, and I cannot help believing, that corporeal things, whose images are formed by thought [which fall under the senses], and are examined by the same, are known with much greater distinctness than that I know not what part of myself which is not imaginable; although, in truth, it may seem strange to say that I know and comprehend with greater distinctness things whose existence appears to me doubtful, that are unknown, and do not belong to me, than others of whose reality I am persuaded, that are known to me, and appertain to my proper nature; in a word, than myself. But I see clearly what is the state of the case. My mind is apt to wander, and will not yet submit to be restrained within the limits of truth. Let us therefore leave the mind to itself once more, and, according to it every kind of liberty [permit it to consider the objects that appear to it from without], in order that, having afterward withdrawn it from these gently and opportunely [and fixed it on the consideration of its being and the properties it finds in itself], it may then be the more easily controlled.

Let us now accordingly consider the objects that are commonly thought to be [the most easily, and likewise] the most distinctly known, viz, the bodies we touch and see; not, indeed, bodies in general, for these general notions are usually somewhat more confused, but one body in particular. Take, for example, this piece of wax; it is quite fresh, having been but recently taken from the beehive; it has not yet lost the sweetness of the honey it contained; it still retains somewhat of the odor of the flowers from which it was gathered; its color, figure, size, are apparent (to the sight); it is hard, cold, easily handled; and sounds when struck upon with the finger. In fine, all that contributes to make a body as distinctly known as possible, is found in the one before us. But, while I am speaking, let it be placed near the fire — what remained of the taste exhales, the smell evaporates, the color changes, its figure is destroyed, its size increases, it becomes liquid, it grows hot, it can hardly be handled, and, although struck upon, it emits no sound. Does the same wax still remain after this change? It must be admitted that it does remain; no one doubts it, or judges otherwise. What, then, was it I knew with so much distinctness in the piece of wax? Assuredly, it could be nothing of all that I observed by means of the senses, since all the things that fell under taste, smell, sight, touch, and hearing are changed, and yet the same wax remains. It was perhaps what I now think, viz, that this wax was neither the sweetness of honey, the pleasant odor of flowers, the whiteness, the figure, nor the sound, but only a body that a little before appeared to me conspicuous under these forms, and which is now perceived under others. But, to speak precisely, what is it that I imagine when I think of it in this way? Let it be attentively considered, and, retrenching all that does not belong to the wax, let us see what remains. There certainly remains nothing, except something extended, flexible, and movable. But what is meant by flexible and movable? Is it not that I imagine that the piece of wax, being round, is capable of becoming square, or of passing from a square into a triangular figure? Assuredly such is not the case, because I conceive that it admits of an infinity of similar changes; and I am, moreover, unable to compass this infinity by imagination, and consequently this conception which I have of the wax is not the product of the faculty of imagination. But what now is this extension? Is it not also unknown? for it becomes greater when the wax is melted, greater when it is boiled, and greater still when the heat increases; and I should not conceive [clearly and] according to truth, the wax as it is, if I did not suppose that the piece we are considering admitted even of a wider variety of extension than I ever imagined. I must, therefore, admit that I cannot even comprehend by imagination what the piece of wax is, and that it is the mind alone (*mens*, Lat., *entendement*, F.) which perceives it. I speak of one piece in particular; for as to wax in general, this is still more evident. But what is the piece of wax that can be perceived only by the [understanding or] mind? It is certainly the same which I see, touch, imagine; and, in fine, it is the same which, from the beginning, I believed it to be. But (and this it is of moment to observe) the perception of it is neither an act of sight, of touch, nor of imagination, and never was either of these, though it might formerly seem so, but is simply an intuition (*inspectio*) of the mind, which may be imperfect and confused, as it formerly was, or very clear and distinct, as it is at present, according as the attention is more or less directed to the elements which it contains, and of which it is composed.

But, meanwhile, I feel greatly astonished when I observe [the weakness of my mind, and] its proneness to error. For although, without at all giving expression to what I think, I consider all this in my own mind, words yet occasionally impede my progress, and I am almost led into error by the terms of ordinary language. We say, for example, that we see the same wax when it is before us, and not that we judge it to be the same from its retaining the same color and figure: whence I should forthwith be disposed to conclude that the wax is known by the act of sight, and not by the intuition of the mind alone, were it not for the analogous instance of human beings passing on in the street below, as observed from a window. In this case I do not fail to say that I see the men themselves, just as I say that I see the wax; and yet what do I see from the window beyond hats and cloaks that might cover artificial machines, whose motions might be determined by springs? But I judge that there are human beings from these appearances, and thus I comprehend, by the faculty of judgment alone which is in the mind, what I believed I saw with my eyes.

The man who makes it his aim to rise to knowledge superior to the common, ought to be ashamed to seek occasions of doubting from the vulgar forms of speech: instead, therefore, of doing this, I shall proceed with the matter in hand, and inquire whether I had a clearer and more perfect perception of the piece of wax when I first saw it, and when I thought I knew it by means of the external sense itself, or, at all events, by the common sense (*sensus communis*), as it is called, that is, by the imaginative faculty; or whether I rather apprehend it more clearly at present, after having examined with greater care, both what it is, and in what way it can be known. It would certainly be ridiculous to entertain any doubt on this point. For what, in that first perception, was there distinct? What did I perceive which any animal might not have perceived? But when I distinguish the wax from its exterior forms, and when, as if I had stripped it of its vestments, I consider it quite naked, it is certain, although some error may still be found in my judgment, that I cannot, nevertheless, thus apprehend it without possessing a human mind.

But, finally, what shall I say of the mind itself, that is, of myself? for as yet I do not admit that I am anything but mind. What, then! I who seem to possess so distinct an apprehension of the piece of wax, do I not know myself, both with greater truth and certitude, and also much more distinctly and clearly? For if I judge that the wax exists because I see it, it assuredly follows, much more evidently, that I myself am or exist, for the same reason: for it is possible that what I see may not in truth be wax, and that I do not even possess eyes with which to see anything; but it cannot be that when I see, or, which comes to the same thing, when I think I see, I myself who think am nothing. So likewise, if I judge that the wax exists because I touch it, it will still also follow that I am; and if I determine that my imagination, or any other cause, whatever it be, persuades me of the existence of the wax, I will still draw the same conclusion. And what is here remarked of the piece of wax, is applicable to all the other things that are external to me. And further, if the [notion or] perception of wax appeared to me more precise and distinct, after that not only sight and touch, but many other causes besides, rendered it manifest to my apprehension, with how much greater distinctness must I now know myself, since all the reasons that contribute to the knowledge of the nature of wax, or of any body whatever, manifest still better the nature of my mind? And there are besides so many other things in the mind itself that contribute to the illustration of its nature, that those dependent on the body, to which I have here referred, scarcely merit to be taken into account.

But, in conclusion, I find I have insensibly reverted to the point I desired; for, since it is now manifest to me that bodies themselves are not properly perceived by the senses nor by the faculty of imagination, but by the intellect alone; and since they are not perceived because they are seen and touched, but only because they are understood [or rightly comprehended by thought], I readily discover that there is nothing more easily or clearly apprehended than my own mind. But because it is difficult to rid one's self so promptly of an opinion to which one has been long accustomed, it will be desirable to tarry for some time at this stage, that, by long continued meditation, I may more deeply impress upon my memory this new knowledge.

MEDITATION III.

Of God: That He Exists.

I will now close my eyes, I will stop my ears, I will turn away my senses from their objects, I will even efface from my consciousness all the images of corporeal things; or at least, because this can hardly be accomplished, I will consider them as empty and false; and thus, holding converse only with myself, and closely examining my nature, I will endeavor to obtain by degrees a more intimate and familiar knowledge of myself. I am a thinking (conscious) thing, that is, a being who doubts, affirms, denies, knows a few objects, and is ignorant of many,—[who loves, hates], wills, refuses, who imagines likewise, and perceives; for, as I before remarked, although the things which I perceive or imagine are perhaps nothing at all apart from me [and in themselves], I am nevertheless assured that those modes of consciousness which I call perceptions and imaginations, in as far only as they are modes of consciousness, exist in me. And in the little I have said I think I have summed up all that I really know, or at least all that up to this time I was aware I knew. Now, as I am endeavoring to extend my knowledge more widely, I will use circumspection, and consider with care whether I can still discover in myself anything further which I have not yet hitherto observed. I am certain that I am a thinking thing; but do I not therefore likewise know what is required to render me certain of a truth? In this first knowledge, doubtless, there is nothing that gives me assurance of its truth except the clear and distinct perception of what I affirm, which would not indeed be sufficient to give me the assurance that what I say is true, if it could ever happen that anything I thus clearly and distinctly perceived should prove false; and accordingly it seems to me that I may now take as a general rule, that all that is very clearly and distinctly apprehended (conceived) is true.

Nevertheless I before received and admitted many things as wholly certain and manifest, which yet I afterward found to be doubtful. What, then, were those?

They were the earth, the sky, the stars, and all the other objects which I was in the habit of perceiving by the senses. But what was it that I clearly [and distinctly] perceived in them? Nothing more than that the ideas and the thoughts of those objects were presented to my mind. And even now I do not deny that these ideas are found in my mind. But there was yet another thing which I affirmed, and which, from having been accustomed to believe it, I thought I clearly perceived, although, in truth, I did not perceive it at all; I mean the existence of objects external to me, from which those ideas proceeded, and to which they had a perfect resemblance; and it was here I was mistaken, or if I judged correctly, this assuredly was not to be traced to any knowledge I possessed (the force of my perception, Lat.).

But when I considered any matter in arithmetic and geometry, that was very simple and easy, as, for example, that two and three added together make five, and things of this sort, did I not view them with at least sufficient clearness to warrant me in affirming their truth? Indeed, if I afterward judged that we ought to doubt of these things, it was for no other reason than because it occurred to me that a God might perhaps have given me such a nature as that I should be deceived, even respecting the matters that appeared to me the most evidently true. But as often as this preconceived opinion of the sovereign power of a God presents itself to my mind, I am constrained to admit that it is easy for him, if he wishes it, to cause me to err, even in matters where I think I possess the highest evidence; and, on the other hand, as often as I direct my attention to things which I think I apprehend with great clearness, I am so persuaded of their truth that I naturally break out into expressions such as these: Deceive me who may, no one will yet ever be able to bring it about that I am not, so long as I shall be conscious that I am, or at any future time cause it to be true that I have never been, it being now true that I am, or make two and three more or less than five, in supposing which, and other like absurdities, I discover a manifest contradiction.

And in truth, as I have no ground for believing that Deity is deceitful, and as, indeed, I have not even considered the reasons by which the existence of a Deity of any kind is established, the ground of doubt that rests only on this supposition is very slight, and, so to speak, metaphysical. But, that I may be able wholly to remove it, I must inquire whether there is a God, as soon as an opportunity of doing so shall present itself; and if I find that there is a God, I must examine likewise whether he can be a deceiver; for, without the knowledge of these two truths, I do not see that I can ever be certain of anything. And that I may be enabled to examine this without interrupting the order of meditation I have proposed to myself [which is, to pass by degrees from the notions that I shall find first in my mind to those I shall afterward discover in it], it is necessary at this stage to divide all my thoughts into certain classes, and to consider in which of these classes truth and error are, strictly speaking, to be found.

Of my thoughts some are, as it were, images of things, and to these alone properly belongs the name IDEA; as when I think [represent to my mind] a man, a chimera, the sky, an angel or God. Others, again, have certain other forms; as when I will, fear, affirm, or deny, I always, indeed, apprehend something as the object of my thought, but I also embrace in thought something more than the representation of the object; and of this class of thoughts some are called volitions or affections, and others judgments.

Now, with respect to ideas, if these are considered only in themselves, and are not referred to any object beyond them, they cannot, properly speaking, be false; for, whether I imagine a goat or chimera, it is not less true that I imagine the one than the other. Nor need we fear that falsity may exist in the will or affections; for, although I may desire objects that are wrong, and even that never existed, it is still true that I desire them. There thus only remain our judgments, in which we must take diligent heed that we be not deceived. But the chief and most ordinary error that arises in them consists in judging that the ideas which are in us are like or conformed to the things that are external to us; for assuredly, if we but considered the ideas themselves as certain modes of our thought (consciousness), without referring them to anything beyond, they would hardly afford any occasion of error.

But among these ideas, some appear to me to be innate, others adventitious, and others to be made by myself (factitious); for, as I have the power of conceiving what is called a thing, or a truth, or a thought, it seems to me that I hold this power from no other source than my own nature; but if I now hear a noise, if I see the sun, or if I feel heat, I have all along judged that these sensations proceeded from certain objects existing out of myself; and, in fine, it appears to me that sirens, hippogryphs, and the like, are inventions of my own mind. But I may even perhaps come to be of opinion that all my ideas are of the class which I call adventitious, or that they are all innate, or that they are all factitious; for I have not yet clearly discovered their true origin; and what I have here principally to do is to consider, with reference to those that appear to come from certain objects without me, what grounds there are for thinking them like these objects.

The first of these grounds is that it seems to me I am so taught by nature; and the second that I am conscious that those ideas are not dependent on my will, and therefore not on myself, for they are frequently presented to me against my will, as at present, whether I will or not, I feel heat; and I am thus persuaded that this sensation or idea (*sensum vel ideam*) of heat is produced in me by something different from myself, viz., by the heat of the fire by which I sit. And it is very reasonable to suppose that this object impresses me with its own likeness rather than any other thing.

But I must consider whether these reasons are sufficiently strong and convincing. When I speak of being taught by nature in this matter, I understand by the word nature only a certain spontaneous impetus that impels me to believe in a resemblance between ideas and their objects, and not a natural light that affords a knowledge of its truth. But these two things are widely different; for what the natural light shows to be true can be in no degree doubtful, as, for example, that I am because I doubt, and other truths of the like kind; inasmuch as I possess no other faculty whereby to distinguish truth from error, which can teach me the falsity of what the natural light declares to be true, and which is equally trustworthy; but with respect to [seemingly] natural impulses, I have observed, when the question related to the choice of right or wrong in action, that they frequently led me to take the worse part; nor do I see that I have any better ground for following them in what relates to truth and error. Then, with respect to the other reason, which is that because these ideas do not depend on my will, they must arise from objects existing without me, I do not find it more convincing than the former; for just as those natural impulses, of which I have lately spoken, are found in me, notwithstanding that they are not always in harmony with my will, so likewise it may be that I possess some power not sufficiently known to myself capable of producing ideas without the aid of external objects, and, indeed, it has always hitherto appeared to me that they are formed during sleep, by some power of this nature, without the aid of aught external. And, in fine, although I should grant that they proceeded from those objects, it is not a necessary consequence that they must be like them. On the contrary, I have observed, in a number of instances, that there was a great difference between the object and its idea. Thus, for example, I find in my mind two wholly diverse ideas of the sun; the one, by which it appears to me extremely small draws its origin from the senses, and should be placed in the class of adventitious ideas; the other, by which it seems to be many times larger than the whole earth, is taken up on astronomical grounds, that is, elicited from certain notions born with me, or is framed by myself in some other manner. These two ideas cannot certainly both resemble the same sun; and reason teaches me that the one which seems to have immediately emanated from it is the most unlike. And these things sufficiently prove that hitherto it has not been from a certain and deliberate judgment, but only from a sort of blind impulse, that I believed in the existence of certain things different from myself, which, by the organs of sense, or by whatever other means it might be, conveyed their ideas or images into my mind [and impressed it with their likenesses].

But there is still another way of inquiring whether, of the objects whose ideas are in my mind, there are any that exist out of me. If ideas are taken in so far only as they are certain modes of consciousness, I do not remark any difference or inequality among them, and all seem, in the same manner, to proceed from myself; but, considering them as images, of which one represents one thing and another a different, it is evident that a great diversity obtains among them. For, without doubt, those that represent substances are something more, and contain in themselves, so to speak, more objective reality [that is, participate by representation in higher degrees of being or perfection], than those that represent only modes or accidents; and again, the idea by which I conceive a God [sovereign], eternal, infinite, [immutable], all-knowing, all-powerful, and the creator of all things that are out of himself, this, I say, has certainly in it more objective reality than those ideas by which finite substances are represented.

Now, it is manifest by the natural light that there must at least be as much reality in the efficient and total cause as in its effect; for whence can the effect draw its reality if not from its cause? And how could the cause communicate to it this reality unless it possessed it in itself? And hence it follows, not only that what is cannot be produced by what is not, but likewise that the more perfect, in other words, that which contains in itself more reality, cannot be the effect of the less perfect; and this is not only evidently true of those effects, whose reality is actual or formal, but likewise of ideas, whose reality is only considered as objective. Thus, for example, the stone that is not yet in existence, not only cannot now commence to be, unless it be produced by that which possesses in itself, formally or eminently, all that enters into its composition, [in other words, by that which contains in itself the same properties that are in the stone, or others superior to them]; and heat can only be produced in a subject that was before devoid of it, by a cause that is of an order, [degree or kind], at least as perfect as heat; and so of the others. But further, even the idea of the heat, or of the stone, cannot exist in me unless it be put there by a cause that contains, at least, as much reality as I conceive existent in the heat or in the stone: for although that cause may not transmit into my idea anything of its actual or formal reality, we ought not on this account to imagine that it is less real; but we ought to consider that, [as every idea is a work of the mind], its nature is such as of itself to demand no other formal reality than that which it borrows from our consciousness, of which it is but a mode [that is, a manner or way of thinking]. But in order that an idea may contain this objective reality rather than that, it must doubtless derive it from some cause in which is found at least as much formal reality as the idea contains of objective; for, if we suppose that there is found in an idea anything which was not in its cause, it must of course derive this from nothing. But, however imperfect may be the mode of existence by which a thing is objectively [or by representation] in the understanding by its idea, we certainly cannot, for all that, allege that this mode of existence is nothing, nor, consequently, that the idea owes its origin to nothing. Nor must it be imagined that, since the reality which is considered in these ideas is only objective, the same reality need not be formally (actually) in the causes of these ideas, but only objectively: for, just as the mode of existing objectively belongs to ideas by their peculiar nature, so likewise the mode of existing formally appertains to the causes of these ideas (at least to the first and principal), by their peculiar nature. And although an idea may give rise to another idea, this regress cannot, nevertheless, be infinite; we must in the end reach a first idea, the cause of which is, as it were, the archetype in which all the reality [or perfection] that is found objectively [or by representation] in these ideas is contained formally [and in act]. I am thus clearly taught by the natural light that ideas exist in me as pictures or images, which may, in truth, readily fall short of the perfection of the objects from which they are taken, but can never contain anything greater or more perfect.

And in proportion to the time and care with which I examine all those matters, the conviction of their truth brightens and becomes distinct. But, to sum up, what conclusion shall I draw from it all? It is this: if the objective reality [or perfection] of any one of my ideas be such as clearly to convince me, that this same reality exists in me neither formally nor eminently, and if, as follows from this, I myself cannot be the cause of it, it is a necessary consequence that I am not alone in the world, but that there is besides myself some other being who exists as the cause of that idea; while, on the contrary, if no such idea be found in my mind, I shall have no sufficient ground of assurance of the existence of any other being besides myself; for, after a most careful search, I have, up to this moment, been unable to discover any other ground.

But, among these my ideas, besides that which represents myself, respecting which there can be here no difficulty, there is one that represents a God; others that represent corporeal and inanimate things; others angels; others animals; and, finally, there are some that represent men like myself. But with respect to the ideas that represent other men, or animals, or angels, I can easily suppose that they were formed by the mingling and composition of the other ideas which I have of myself, of corporeal things, and of God, although they were, apart from myself, neither men, animals, nor angels. And with regard to the ideas of corporeal objects, I never discovered in them anything so great or excellent which I myself did not appear capable of originating; for, by considering these ideas closely and scrutinizing them individually, in the same way that I yesterday examined the idea of wax, I find that there is but little in them that is clearly and distinctly perceived. As belonging to the class of things that are clearly apprehended, I recognize the following, viz, magnitude or extension in length, breadth, and depth; figure, which results from the termination of extension; situation, which bodies of diverse figures preserve with reference to each other; and motion or the change of situation; to which may be added substance, duration, and number. But with regard to light, colors, sounds, odors, tastes, heat, cold, and the other tactile qualities, they are thought with so much obscurity and confusion, that I cannot determine even whether they are true or false; in other words, whether or not the ideas I have of these qualities are in truth the ideas of real objects. For although I before remarked that it is only in judgments that formal falsity, or falsity properly so called, can be met with, there may nevertheless be found in ideas a certain material falsity, which arises when they represent what is nothing as if it were something. Thus, for example, the ideas I have of cold and heat are so far from being clear and distinct, that I am unable from them to discover whether cold is only the privation of heat, or heat the privation of cold; or whether they are or are not real qualities: and since, ideas being as it were images there can be none that does not seem to us to represent some object, the idea which represents cold as something real and positive will not improperly be called false, if it be correct to say that cold is nothing but a privation of heat; and so in other cases. To ideas of this kind, indeed, it is not necessary that I should assign any author besides myself: for if they are false, that is, represent objects that are unreal, the natural light teaches me that they proceed from nothing; in other words, that they are in me only because something is wanting to the perfection of my nature; but if these ideas are true, yet because they exhibit to me so little reality that I cannot even distinguish the object represented from non-being, I do not see why I should not be the author of them.

With reference to those ideas of corporeal things that are clear and distinct, there are some which, as appears to me, might have been taken from the idea I have of myself, as those of substance, duration, number, and the like. For when I think that a stone is a substance, or a thing capable of existing of itself, and that I am likewise a substance, although I conceive that I am a thinking and non-extended thing, and that the stone, on the contrary, is extended and unconscious, there being thus the greatest diversity between the two concepts, yet these two ideas seem to have this in common that they both represent substances. In the same way, when I think of myself as now existing, and recollect besides that I existed some time ago, and when I am conscious of various thoughts whose number I know, I then acquire the ideas of duration and number, which I can afterward transfer to as many objects as I please. With respect to the other qualities that go to make up the ideas of corporeal objects, viz, extension, figure, situation, and motion, it is true that they are not formally in me, since I am merely a thinking being; but because they are only certain modes of substance, and because I my self am a substance, it seems possible that they may be contained in me eminently.

There only remains, therefore, the idea of God, in which I must consider whether there is anything that cannot be supposed to originate with myself. By the name God, I understand a substance infinite, [eternal, immutable], independent, all-knowing, all-powerful, and by which I myself, and every other thing that exists, if any such there be, were created. But these properties are so great and excellent, that the more attentively I consider them the less I feel persuaded that the idea I have of them owes its origin to myself alone. And thus it is absolutely necessary to conclude, from all that I have before said, that God exists: for though the idea of substance be in my mind owing to this, that I myself am a substance, I should not, however, have the idea of an infinite substance, seeing I am a finite being, unless it were given me by some substance in reality infinite.

And I must not imagine that I do not apprehend the infinite by a true idea, but only by the negation of the finite, in the same way that I comprehend repose and darkness by the negation of motion and light: since, on the contrary, I clearly perceive that there is more reality in the infinite substance than in the finite, and therefore that in some way I possess the perception (notion) of the infinite before that of the finite, that is, the perception of God before that of myself, for how could I know that I doubt, desire, or that something is wanting to me, and that I am not wholly perfect, if I possessed no idea of a being more perfect than myself, by comparison of which I knew the deficiencies of my nature?

And it cannot be said that this idea of God is perhaps materially false, and consequently that it may have arisen from nothing [in other words, that it may exist in me from my imperfection], as I before said of the ideas of heat and cold, and the like: for, on the contrary, as this idea is very clear and distinct, and contains in itself more objective reality than any other, there can be no one of itself more true, or less open to the suspicion of falsity.

The idea, I say, of a being supremely perfect, and infinite, is in the highest degree true; for although, perhaps, we may imagine that such a being does not exist, we cannot, nevertheless, suppose that his idea represents nothing real, as I have already said of the idea of cold. It is likewise clear and distinct in the highest degree, since whatever the mind clearly and distinctly conceives as real or true, and as implying any perfection, is contained entire in this idea. And this is true, nevertheless, although I do not comprehend the infinite, and although there may be in God an infinity of things that I cannot comprehend, nor perhaps even compass by thought in any way; for it is of the nature of the infinite that it should not be comprehended by the finite; and it is enough that I rightly understand this, and judge that all which I clearly perceive, and in which I know there is some perfection, and perhaps also an infinity of properties of which I am ignorant, are formally or eminently in God, in order that the idea I have of him may become the most true, clear, and distinct of all the ideas in my mind.

But perhaps I am something more than I suppose myself to be, and it may be that all those perfections which I attribute to God, in some way exist potentially in me, although they do not yet show themselves, and are not reduced to act. Indeed, I am already conscious that my knowledge is being increased [and perfected] by degrees; and I see nothing to prevent it from thus gradually increasing to infinity, nor any reason why, after such increase and perfection, I should not be able thereby to acquire all the other perfections of the Divine nature; nor, in fine, why the power I possess of acquiring those perfections, if it really now exist in me, should not be sufficient to produce the ideas of them. Yet, on looking more closely into the matter, I discover that this cannot be; for, in the first place, although it were true that my knowledge daily acquired new degrees of perfection, and although there were potentially in my nature much that was not as yet actually in it, still all these excellences make not the slightest approach to the idea I have of the Deity, in whom there is no perfection merely potentially [but all actually] existent; for it is even an unmistakable token of imperfection in my knowledge, that it is augmented by degrees. Further, although my knowledge increase more and more, nevertheless I am not, therefore, induced to think that it will ever be actually infinite, since it can never reach that point beyond which it shall be incapable of further increase. But I conceive God as actually infinite, so that nothing can be added to his perfection. And, in fine, I readily perceive that the objective being of an idea cannot be produced by a being that is merely potentially existent, which, properly speaking, is nothing, but only by a being existing formally or actually.

And, truly, I see nothing in all that I have now said which it is not easy for any one, who shall carefully consider it, to discern by the natural light; but when I allow my attention in some degree to relax, the vision of my mind being obscured, and, as it were, blinded by the images of sensible objects, I do not readily remember the reason why the idea of a being more perfect than myself, must of necessity have proceeded from a being in reality more perfect. On this account I am here desirous to inquire further, whether I, who possess this idea of God, could exist supposing there were no God. And I ask, from whom could I, in that case, derive my existence? Perhaps from myself, or from my parents, or from some other causes less perfect than God; for anything more perfect, or even equal to God, cannot be thought or imagined. But if I [were independent of every other existence, and] were myself the author of my being, I should doubt of nothing, I should desire nothing, and, in fine, no perfection would be awanting to me; for I should have bestowed upon myself every perfection of which I possess the idea, and I should thus be God. And it must not be imagined that what is now wanting to me is perhaps of more difficult acquisition than that of which I am already possessed; for, on the contrary, it is quite manifest that it was a matter of much higher difficulty that I, a thinking being, should arise from nothing, than it would be for me to acquire the knowledge of many things of which I am ignorant, and which are merely the accidents of a thinking substance; and certainly, if I possessed of myself the greater perfection of which I have now spoken [in other words, if I were the author of my own existence], I would not at least have denied to myself things that may be more easily obtained [as that infinite variety of knowledge of which I am at present destitute]. I could not, indeed, have denied to myself any property which I perceive is contained in the idea of God, because there is none of these that seems to me to be more difficult to make or acquire; and if there were any that should happen to be more difficult to acquire, they would certainly appear so to me (supposing that I myself were the source of the other things I possess), because I should discover in them a limit to my power. And though I were to suppose that I always was as I now am, I should not, on this ground, escape the force of these reasonings, since it would not follow, even on this supposition, that no author of my existence needed to be sought after. For the whole time of my life may be divided into an infinity of parts, each of which is in no way dependent on any other; and, accordingly, because I was in existence a short time ago, it does not follow that I must now exist, unless in this moment some cause create me anew as it were, that is, conserve me. In truth, it is perfectly clear and evident to all who will attentively consider the nature of duration, that the conservation of a substance, in each moment of its duration, requires the same power and act that would be necessary to create it, supposing it were not yet in existence; so that it is manifestly a dictate of the natural light that conservation and creation differ merely in respect of our mode of thinking [and not in reality]. All that is here required, therefore, is that I interrogate myself to discover whether I possess any power by means of which I can bring it about that I, who now am, shall exist a moment afterward: for, since I am merely a thinking thing (or since, at least, the precise question, in the meantime, is only of that part of myself), if such a power resided in me, I should, without doubt, be conscious of it; but I am conscious of no such power, and thereby I manifestly know that I am dependent upon some being different from myself.

But perhaps the being upon whom I am dependent is not God, and I have been produced either by my parents, or by some causes less perfect than Deity. This cannot be: for, as I before said, it is perfectly evident that there must at least be as much reality in the cause as in its effect; and accordingly, since I am a thinking thing and possess in myself an idea of God, whatever in the end be the cause of my existence, it must of necessity be admitted that it is likewise a thinking being, and that it possesses in itself the idea and all the perfections I attribute to Deity. Then it may again be inquired whether this cause owes its origin and existence to itself, or to some other cause. For if it be self-existent, it follows, from what I have before laid down, that this cause is God; for, since it possesses the perfection of self-existence, it must likewise, without doubt, have the power of actually possessing every perfection of which it has the idea—in other words, all the perfections I conceive to belong to God. But if it owe its existence to another cause than itself, we demand again, for a similar reason, whether this second cause exists of itself or through some other, until, from stage to stage, we at length arrive at an ultimate cause, which will be God. And it is quite manifest that in this matter there can be no infinite regress of causes, seeing that the question raised respects not so much the cause which once produced me, as that by which I am at this present moment conserved.

Nor can it be supposed that several causes concurred in my production, and that from one I received the idea of one of the perfections I attribute to Deity, and from another the idea of some other, and thus that all those perfections are indeed found somewhere in the universe, but do not all exist together in a single being who is God; for, on the contrary, the unity, the simplicity, or inseparability of all the properties of Deity, is one of the chief perfections I conceive him to possess; and the idea of this unity of all the perfections of Deity could certainly not be put into my mind by any cause from which I did not likewise receive the ideas of all the other perfections; for no power could enable me to embrace them in an inseparable unity, without at the same time giving me the knowledge of what they were [and of their existence in a particular mode].

Finally, with regard to my parents [from whom it appears I sprung], although all that I believed respecting them be true, it does not, nevertheless, follow that I am conserved by them, or even that I was produced by them, in so far as I am a thinking being. All that, at the most, they contributed to my origin was the giving of certain dispositions (modifications) to the matter in which I have hitherto judged that I or my mind, which is what alone I now consider to be myself, is inclosed; and thus there can here be no difficulty with respect to them, and it is absolutely necessary to conclude from this alone that I am, and possess the idea of a being absolutely perfect, that is, of God, that his existence is most clearly demonstrated.

There remains only the inquiry as to the way in which I received this idea from God; for I have not drawn it from the senses, nor is it even presented to me unexpectedly, as is usual with the ideas of sensible objects, when these are presented or appear to be presented to the external organs of the senses; it is not even a pure production or fiction of my mind, for it is not in my power to take from or add to it; and consequently there but remains the alternative that it is innate, in the same way as is the idea of myself. And, in truth, it is not to be wondered at that God, at my creation, implanted this idea in me, that it might serve, as it were, for the mark of the workman impressed on his work; and it is not also necessary that the mark should be something different from the work itself; but considering only that God is my creator, it is highly probable that he in some way fashioned me after his own image and likeness, and that I perceive this likeness, in which is contained the idea of God, by the same faculty by which I apprehend myself, in other words, when I make myself the object of reflection, I not only find that I am an incomplete, [imperfect] and dependent being, and one who unceasingly aspires after something better and greater than he is; but, at the same time, I am assured likewise that he upon whom I am dependent possesses in himself all the goods after which I aspire [and the ideas of which I find in my mind], and that not merely indefinitely and potentially, but infinitely and actually, and that he is thus God. And the whole force of the argument of which I have here availed myself to establish the existence of God, consists in this, that I perceive I could not possibly be of such a nature as I am, and yet have in my mind the idea of a God, if God did not in reality exist — this same God, I say, whose idea is in my mind — that is, a being who possesses all those lofty perfections, of which the mind may have some slight conception, without, however, being able fully to comprehend them, and who is wholly superior to all defect [and has nothing that marks imperfection]: whence it is sufficiently manifest that he cannot be a deceiver, since it is a dictate of the natural light that all fraud and deception spring from some defect.

But before I examine this with more attention, and pass on to the consideration of other truths that may be evolved out of it, I think it proper to remain here for some time in the contemplation of God himself—that I may ponder at leisure his marvelous attributes—and behold, admire, and adore the beauty of this light so unspeakably great, as far, at least, as the strength of my mind, which is to some degree dazzled by the sight, will permit. For just as we learn by faith that the supreme felicity of another life consists in the contemplation of the Divine majesty alone, so even now we learn from experience that a like meditation, though incomparably less perfect, is the source of the highest satisfaction of which we are susceptible in this life.

MEDITATION IV.

Of Truth and Error.

I HAVE been habituated these bygone days to detach my mind from the senses, and I have accurately observed that there is exceedingly little which is known with certainty respecting corporeal objects, that we know much more of the human mind, and still more of God himself. I am thus able now without difficulty to abstract my mind from the contemplation of [sensible or] imaginable objects, and apply it to those which, as disengaged from all matter, are purely intelligible. And certainly the idea I have of the human mind in so far as it is a thinking thing, and not extended in length, breadth, and depth, and participating in none of the properties of body, is incomparably more distinct than the idea of any corporeal object; and when I consider that I doubt, in other words, that I am an incomplete and dependent being, the idea of a complete and independent being, that is to say of God, occurs to my mind with so much clearness and distinctness, and from the fact alone that this idea is found in me, or that I who possess it exist, the conclusions that God exists, and that my own existence, each moment of its continuance, is absolutely dependent upon him, are so manifest, as to lead me to believe it impossible that the human mind can know anything with more clearness and certitude. And now I seem to discover a path that will conduct us from the contemplation of the true God, in whom are contained all the treasures of science and wisdom, to the knowledge of the other things in the universe.

For, in the first place, I discover that it is impossible for him ever to deceive me, for in all fraud and deceit there is a certain imperfection: and although it may seem that the ability to deceive is a mark of subtlety or power, yet the will testifies without doubt of malice and weakness; and such, accordingly, cannot be found in God. In the next place, I am conscious that I possess a certain faculty of judging [or discerning truth from error], which I doubtless received from God, along with whatever else is mine; and since it is impossible that he should will to deceive me, it is likewise certain that he has not given me a faculty that will ever lead me into error, provided I use it aright.

And there would remain no doubt on this head, did it not seem to follow from this, that I can never therefore be deceived; for if all I possess be from God, and if he planted in me no faculty that is deceitful, it seems to follow that I can never fall into error. Accordingly, it is true that when I think only of God (when I look upon myself as coming from God, Fr.), and turn wholly to him, I discover [in myself] no cause of error or falsity: but immediately thereafter, recurring to myself, experience assures me that I am nevertheless subject to innumerable errors. When I come to inquire into the cause of these, I observe that there is not only present to my consciousness a real and positive idea of God, or of a being supremely perfect, but also, so to speak, a certain negative idea of nothing, in other words, of that which is at an infinite distance from every sort of perfection, and that I am, as it were, a mean between God and nothing, or placed in such a way between absolute existence and non-existence, that there is in truth nothing in me to lead me into error, in so far as an absolute being is my creator; but that, on the other hand, as I thus likewise participate in some degree of nothing or of non-being, in other words, as I am not myself the supreme

Being, and as I am wanting in many perfections, it is not surprising I should fall into error. And I hence discern that error, so far as error is not something real, which depends for its existence on God, but is simply defect; and therefore that, in order to fall into it, it is not necessary God should have given me a faculty expressly for this end, but that my being deceived arises from the circumstance that the power which God has given me of discerning truth from error is not infinite.

Nevertheless this is not yet quite satisfactory; for error is not a pure negation, [in other words, it is not the simple deficiency or want of some knowledge which is not due], but the privation or want of some knowledge which it would seem I ought to possess. But, on considering the nature of God, it seems impossible that he should have planted in his creature any faculty not perfect in its kind, that is, wanting in some perfection due to it: for if it be true, that in proportion to the skill of the maker the perfection of his work is greater, what thing can have been produced by the supreme Creator of the universe that is not absolutely perfect in all its parts? And assuredly there is no doubt that God could have created me such as that I should never be deceived; it is certain, likewise, that he always wills what is best: is it better, then, that I should be capable of being deceived than that I should not?

Considering this more attentively, the first thing that occurs to me is the reflection that I must not be surprised if I am not always capable of comprehending the reasons why God acts as he does; nor must I doubt of his existence because I find, perhaps, that there are several other things besides the present respecting which I understand neither why nor how they were created by him; for, knowing already that my nature is extremely weak and limited, and that the nature of God, on the other hand, is immense, incomprehensible, and infinite, I have no longer any difficulty in discerning that there is an infinity of things in his power whose causes transcend the grasp of my mind: and this consideration alone is sufficient to convince me, that the whole class of final causes is of no avail in physical [or natural] things; for it appears to me that I cannot, without exposing myself to the charge of temerity, seek to discover the [impenetrable] ends of Deity.

It further occurs to me that we must not consider only one creature apart from the others, if we wish to determine the perfection of the works of Deity, but generally all his creatures together; for the same object that might perhaps, with some show of reason, be deemed highly imperfect if it were alone in the world, may for all that be the most perfect possible, considered as forming part of the whole universe: and although, as it was my purpose to doubt of everything, I only as yet know with certainty my own existence and that of God, nevertheless, after having remarked the infinite power of Deity, I cannot deny that we may have produced many other objects, or at least that he is able to produce them, so that I may occupy a place in the relation of a part to the great whole of his creatures.

Whereupon, regarding myself more closely, and considering what my errors are (which alone testify to the existence of imperfection in me), I observe that these depend on the concurrence of two causes, viz, the faculty of cognition, which I possess, and that of election or the power of free choice,—in other words, the understanding and the will. For by the understanding alone, I [neither affirm nor deny anything but] merely apprehend (*percipio*) the ideas regarding which I may form a judgment; nor is any error, properly so called, found in it thus accurately taken. And although there are perhaps innumerable objects in the world of which I have no idea in my understanding, it cannot, on that account be said that I am deprived of those ideas [as of something that is due to my nature], but simply that I do not possess them, because, in truth, there is no ground to prove that Deity ought to have endowed me with a larger faculty of cognition than he has actually bestowed upon me; and however skillful a workman I suppose him to be, I have no reason, on that account, to think that it was obligatory on him to give to each of his works all the perfections he is able to bestow upon some. Nor, moreover, can I complain that God has not given me freedom of choice, or a will sufficiently ample and perfect, since, in truth, I am conscious of will so ample and extended as to be superior to all limits. And what appears to me here to be highly remarkable is that, of all the other properties I possess, there is none so great and perfect as that I do not clearly discern it could be still greater and more perfect.

For, to take an example, if I consider the faculty of understanding which I possess, I find that it is of very small extent, and greatly limited, and at the same time I form the idea of another faculty of the same nature, much more ample and even infinite, and seeing that I can frame the idea of it, I discover, from this circumstance alone, that it pertains to the nature of God. In the same way, if I examine the faculty of memory or imagination, or any other faculty I possess, I find none that is not small and circumscribed, and in God immense [and infinite]. It is the faculty of will only, or freedom of choice, which I experience to be so great that I am unable to conceive the idea of another that shall be more ample and extended; so that it is chiefly my will which leads me to discern that I bear a certain image and similitude of Deity. For although the faculty of will is incomparably greater in God than in myself, as well in respect of the knowledge and power that are conjoined with it, and that render it stronger and more efficacious, as in respect of the object, since in him it extends to a greater number of things, it does not, nevertheless, appear to me greater, considered in itself formally and precisely: for the power of will consists only in this, that we are able to do or not to do the same thing (that is, to affirm or deny, to pursue or shun it), or rather in this alone, that in affirming or denying, pursuing or shunning, what is proposed to us by the understanding, we so act that we are not conscious of being determined to a particular action by any external force. For, to the possession of freedom, it is not necessary that I be alike indifferent toward each of two contraries; but, on the contrary, the more I am inclined toward the one, whether because I clearly know that in it there is the reason of truth and goodness, or because God thus internally disposes my thought, the more freely do I choose and embrace it; and assuredly divine grace and natural knowledge, very far from diminishing liberty, rather augment and fortify it. But the indifference of which I am conscious when I am not impelled to one side rather than to another for want of a reason, is the lowest grade of liberty, and manifests defect or negation of knowledge rather than perfection of will; for if I always clearly knew what was true and good, I should never have any difficulty in determining what judgment I ought to come to, and what choice I ought to make, and I should thus be entirely free without ever being indifferent.

From all this I discover, however, that neither the power of willing, which I have received from God, is of itself the source of my errors, for it is exceedingly ample and perfect in its kind; nor even the power of understanding, for as I conceive no object unless by means of the faculty that God bestowed upon me, all that I conceive is doubtless rightly conceived by me, and it is impossible for me to be deceived in it.

Whence, then, spring my errors? They arise from this cause alone, that I do not restrain the will, which is of much wider range than the understanding, within the same limits, but extend it even to things I do not understand, and as the will is of itself indifferent to such, it readily falls into error and sin by choosing the false in room of the true, and evil instead of good.

For example, when I lately considered whether aught really existed in the world, and found that because I considered this question, it very manifestly followed that I myself existed, I could not but judge that what I so clearly conceived was true, not that I was forced to this judgment by any external cause, but simply because great clearness of the understanding was succeeded by strong inclination in the will; and I believed this the more freely and spontaneously in proportion as I was less indifferent with respect to it. But now I not only know that I exist, in so far as I am a thinking being, but there is likewise presented to my mind a certain idea of corporeal nature; hence I am in doubt as to whether the thinking nature which is in me, or rather which I myself am, is different from that corporeal nature, or whether both are merely one and the same thing, and I here suppose that I am as yet ignorant of any reason that would determine me to adopt the one belief in preference to the other; whence it happens that it is a matter of perfect indifference to me which of the two suppositions I affirm or deny, or whether I form any judgment at all in the matter.

This indifference, moreover, extends not only to things of which the understanding has no knowledge at all, but in general also to all those which it does not discover with perfect clearness at the moment the will is deliberating upon them; for, however probable the conjectures may be that dispose me to form a judgment in a particular matter, the simple knowledge that these are merely conjectures, and not certain and indubitable reasons, is sufficient to lead me to form one that is directly the opposite. Of this I lately had abundant experience, when I laid aside as false all that I had before held for true, on the single ground that I could in some degree doubt of it. But if I abstain from judging of a thing when I do not conceive it with sufficient clearness and distinctness, it is plain that I act rightly, and am not deceived; but if I resolve to deny or affirm, I then do not make a right use of my free will; and if I affirm what is false, it is evident that I am deceived; moreover, even although I judge according to truth, I stumble upon it by chance, and do not therefore escape the imputation of a wrong use of my freedom; for it is a dictate of the natural light, that the knowledge of the understanding ought always to precede the determination of the will.

And it is this wrong use of the freedom of the will in which is found the privation that constitutes the form of error. Privation, I say, is found in the act, in so far as it proceeds from myself, but it does not exist in the faculty which I received from God, nor even in the act, in so far as it depends on him; for I have assuredly no reason to complain that God has not given me a greater power of intelligence or more perfect natural light than he has actually bestowed, since it is of the nature of a finite understanding not to comprehend many things, and of the nature of a created understanding to be finite; on the contrary, I have every reason to render thanks to God, who owed me nothing, for having given me all the perfections I possess, and I should be far from thinking that he has unjustly deprived me of, or kept back, the other perfections which he has not bestowed upon me.

I have no reason, moreover, to complain because he has given me a will more ample than my understanding, since, as the will consists only of a single element, and that indivisible, it would appear that this faculty is of such a nature that nothing could be taken from it [without destroying it]; and certainly, the more extensive it is, the more cause I have to thank the goodness of him who bestowed it upon me.

And, finally, I ought not also to complain that God concurs with me in forming the acts of this will, or the judgments in which I am deceived, because those acts are wholly true and good, in so far as they depend on God; and the ability to form them is a higher degree of perfection in my nature than the want of it would be. With regard to privation, in which alone consists the formal reason of error and sin, this does not require the concurrence of Deity, because it is not a thing [or existence], and if it be referred to God as to its cause, it ought not to be called privation, but negation [according to the signification of these words in the schools]. For in truth it is no imperfection in Deity that he has accorded to me the power of giving or withholding my assent from certain things of which he has not put a clear and distinct knowledge in my understanding; but it is doubtless an imperfection in me that I do not use my freedom aright, and readily give my judgment on matters which I only obscurely and confusedly conceive.

I perceive, nevertheless, that it was easy for Deity so to have constituted me as that I should never be deceived, although I still remained free and possessed of a limited knowledge, viz., by implanting in my understanding a clear and distinct knowledge of all the objects respecting which I should ever have to deliberate; or simply by so deeply engraving on my memory the resolution to judge of nothing without previously possessing a clear and distinct conception of it, that I should never forget it. And I easily understand that, in so far as I consider myself as a single whole, without reference to any other being in the universe, I should have been much more perfect than I now am, had Deity created me superior to error; but I cannot therefore deny that it is not somehow a greater perfection in the universe, that certain of its parts are not exempt from defect, as others are, than if they were all perfectly alike.

And I have no right to complain because God, who placed me in the world, was not willing that I should sustain that character which of all others is the chief and most perfect; I have even good reason to remain satisfied on the ground that, if he has not given me the perfection of being superior to error by the first means I have pointed out above, which depends on a clear and evident knowledge of all the matters regarding which I can deliberate, he has at least left in my power the other means, which is, firmly to retain the resolution never to judge where the truth is not clearly known to me: for, although I am conscious of the weakness of not being able to keep my mind continually fixed on the same thought, I can nevertheless, by attentive and oft-repeated meditation, impress it so strongly on my memory that I shall never fail to recollect it as often as I require it, and I can acquire in this way the habitude of not erring; and since it is in being superior to error that the highest and chief perfection of man consists, I deem that I have not gained little by this day's meditation, in having discovered the source of error and falsity.

And certainly this can be no other than what I have now explained: for as often as I so restrain my will within the limits of my knowledge, that it forms no judgment except regarding objects which are clearly and distinctly represented to it by the understanding, I can never be deceived; because every clear and distinct conception is doubtless something, and as such cannot owe its origin to nothing, but must of necessity have God for its author — God, I say, who, as supremely perfect, cannot, without a contradiction, be the cause of any error; and consequently it is necessary to conclude that every such conception [or judgment] is true. Nor have I merely learned to-day what I must avoid to escape error, but also what I must do to arrive at the knowledge of truth; for I will assuredly reach truth if I only fix my attention sufficiently on all the things I conceive perfectly, and separate these from others which I conceive more confusedly and obscurely; to which for the future I shall give diligent heed.

MEDITATION V.

OF THE ESSENCE OF MATERIAL THINGS; AND, AGAIN, OF GOD; THAT HE EXISTS.

SEVERAL other questions remain for consideration respecting the attributes of God and my own nature or mind. I will, however, on some other occasion perhaps resume the investigation of these. Meanwhile, as I have discovered what must be done and what avoided to arrive at the knowledge of truth, what I have chiefly to do is to essay to emerge from the state of doubt in which I have for some time been, and to discover whether anything can be known with certainty regarding material objects. But before considering whether such objects as I conceive exist without me, I must examine their ideas in so far as these are to be found in my consciousness, and discover which of them are distinct and which confused.

In the first place, I distinctly imagine that quantity which the philosophers commonly call continuous, or the extension in length, breadth, and depth that is in this quantity, or rather in the object to which it is attributed. Further, I can enumerate in it many diverse parts, and attribute to each of these all sorts of sizes, figures, situations, and local motions; and, in fine, I can assign to each of these motions all degrees of duration. And I not only distinctly know these things when I thus consider them in general; but besides, by a little attention, I discover innumerable particulars respecting figures, numbers, motion, and the like, which are so evidently true, and so accordant with my nature, that when I now discover them I do not so much appear to learn anything new, as to call to remembrance what I before knew, or for the first time to remark what was before in my mind, but to which I had not hitherto directed my attention. And what I here find of most importance is, that I discover in my mind innumerable ideas of certain objects, which cannot be esteemed pure negations, although perhaps they possess no reality beyond my thought, and which are not framed by me though it may be in my power to think, or not to think them, but possess true and immutable natures of their own. As, for example, when I imagine a triangle, although there is not perhaps and never was in any place in the universe apart from my thought one such figure, it remains true nevertheless that this figure possesses a certain determinate nature, form, or essence, which is immutable and eternal, and not framed by me, nor in any degree dependent on my thought; as appears from the circumstance, that diverse properties of the triangle may be demonstrated, viz, that its three angles are equal to two right, that its greatest side is subtended by its greatest angle, and the like, which, whether I will or not, I now clearly discern to belong to it, although before I did not at all think of them, when, for the first time, I imagined a triangle, and which accordingly cannot be said to have been invented by me. Nor is it a valid objection to allege, that perhaps this idea of a triangle came into my mind by the medium of the senses, through my having seen bodies of a triangular figure; for I am able to form in thought an innumerable variety of figures with regard to which it cannot be supposed that they were ever objects of sense, and I can nevertheless demonstrate diverse properties of their nature no less than of the triangle, all of which are assuredly true since I clearly conceive them: and they are therefore something, and not mere negations; for it is highly evident that all that is true is something, [truth being identical with existence]; and I have already fully shown the truth of the principle, that whatever is clearly and distinctly known is true. And although this had not been demonstrated, yet the nature of my mind is such as to compel me to assert to what I clearly conceive while I so conceive it; and I recollect that even when I still strongly adhered to the objects of sense, I reckoned among the number of the most certain truths those I clearly conceived relating to figures, numbers, and other matters that pertain to arithmetic and geometry, and in general to the pure mathematics.

But now if because I can draw from my thought the idea of an object, it follows that all I clearly and distinctly apprehend to pertain to this object, does in truth belong to it, may I not from this derive an argument for the existence of God? It is certain that I no less find the idea of a God in my consciousness, that is the idea of a being supremely perfect, than that of any figure or number whatever: and I know with not less clearness and distinctness that an [actual and] eternal existence pertains to his nature than that all which is demonstrable of any figure or number really belongs to the nature of that figure or number; and, therefore, although all the conclusions of the preceding Meditations were false, the existence of God would pass with me for a truth at least as certain as I ever judged any truth of mathematics to be, although indeed such a doctrine may at first sight appear to contain more sophistry than truth. For, as I have been accustomed in every other matter to distinguish between existence and essence, I easily believe that the existence can be separated from the essence of God, and that thus God may be conceived as not actually existing. But, nevertheless, when I think of it more attentively, it appears that the existence can no more be separated from the essence of God, than the idea of a mountain from that of a valley, or the equality of its three angles to two right angles, from the essence of a [rectilineal] triangle; so that it is not less impossible to conceive a God, that is, a being supremely perfect, to whom existence is awanting, or who is devoid of a certain perfection, than to conceive a mountain without a valley.

But though, in truth, I cannot conceive a God unless as existing, any more than I can a mountain without a valley, yet, just as it does not follow that there is any mountain in the world merely because I conceive a mountain with a valley, so likewise, though I conceive God as existing, it does not seem to follow on that account that God exists; for my thought imposes no necessity on things; and as I may imagine a winged horse, though there be none such, so I could perhaps attribute existence to God, though no God existed. But the cases are not analogous, and a fallacy lurks under the semblance of this objection: for because I cannot conceive a mountain without a valley, it does not follow that there is any mountain or valley in existence, but simply that the mountain or valley, whether they do or do not exist, are inseparable from each other; whereas, on the other hand, because I cannot conceive God unless as existing, it follows that existence is inseparable from him, and therefore that he really exists: not that this is brought about by my thought, or that it imposes any necessity on things, but, on the contrary, the necessity which lies in the thing itself, that is, the necessity of the existence of God, determines me to think in this way: for it is not in my power to conceive a God without existence, that is, a being supremely perfect, and yet devoid of an absolute perfection, as I am free to imagine a horse with or without wings.

Nor must it be alleged here as an objection, that it is in truth necessary to admit that God exists, after having supposed him to possess all perfections, since existence is one of them, but that my original supposition was not necessary; just as it is not necessary to think that all quadrilateral figures can be inscribed in the circle, since, if I supposed this, I should be constrained to admit that the rhombus, being a figure of four sides, can be therein inscribed, which, however, is manifestly false. This objection is, I say, incompetent; for although it may not be necessary that I shall at any time entertain the notion of Deity, yet each time I happen to think of a first and sovereign being, and to draw, so to speak, the idea of him from the storehouse of the mind, I am necessitated to attribute to him all kinds of perfections, though I may not then enumerate them all, nor think of each of them in particular. And this necessity is sufficient, as soon as I discover that existence is a perfection, to cause me to infer the existence of this first and sovereign being; just as it is not necessary that I should ever imagine any triangle, but whenever I am desirous of considering a rectilineal figure composed of only three angles, it is absolutely necessary to attribute those properties to it from which it is correctly inferred that its three angles are not greater than two right angles, although perhaps I may not then advert to this relation in particular. But when I consider what figures are capable of being inscribed in the circle, it is by no means necessary to hold that all quadrilateral figures are of this number; on the contrary, I cannot even imagine such to be the case, so long as I shall be unwilling to accept in thought aught that I do not clearly and distinctly conceive; and consequently there is a vast difference between false suppositions, as is the one in question, and the true ideas that were born with me, the first and chief of which is the idea of God. For indeed I discern on many grounds that this idea is not factitious depending simply on my thought, but that it is the representation of a true and immutable nature: in the first place because I can conceive no other being, except God, to whose essence existence [necessarily] pertains; in the second, because it is impossible to conceive two or more gods of this kind; and it being supposed that one such God exists, I clearly see that he must have existed from all eternity, and will exist to all eternity; and finally, because I apprehend many other properties in God, none of which I can either diminish or change.

But, indeed, whatever mode of probation I in the end adopt, it always returns to this, that it is only the things I clearly and distinctly conceive which have the power of completely persuading me. And although, of the objects I conceive in this manner, some, indeed, are obvious to every one, while others are only discovered after close and careful investigation; nevertheless after they are once discovered, the latter are not esteemed less certain than the former. Thus, for example, to take the case of a right-angled triangle, although it is not so manifest at first that the square of the base is equal to the squares of the other two sides, as that the base is opposite to the greatest angle; nevertheless, after it is once apprehended, we are as firmly persuaded of the truth of the former as of the latter. And, with respect to God, if I were not pre-occupied by prejudices, and my thought beset on all sides by the continual presence of the images of sensible objects, I should know nothing sooner or more easily than the fact of his being. For is there any truth more clear than the existence of a Supreme Being, or of God, seeing it is to his essence alone that [necessary and eternal] existence pertains And although the right conception of this truth has cost me much close thinking, nevertheless at present I feel not only as assured of it as of what I deem most certain, but I remark further that the certitude of all other truths is so absolutely dependent on it, that without this knowledge it is impossible ever to know anything perfectly.

For although I am of such a nature as to be unable, while I possess a very clear and distinct apprehension of a matter, to resist the conviction of its truth, yet because my constitution is also such as to incapacitate me from keeping my mind continually fixed on the same object, and as I frequently recollect a past judgment without at the same time being able to recall the grounds of it, it may happen meanwhile that other reasons are presented to me which would readily cause me to change my opinion, if I did not know that God existed; and thus I should possess no true and certain knowledge, but merely vague and vacillating opinions. Thus, for example, when I consider the nature of the [rectilineal] triangle, it most clearly appears to me, who have been instructed in the principles of geometry, that its three angles are equal to two right angles, and I find it impossible to believe otherwise, while I apply my mind to the demonstration; but as soon as I cease from attending to the process of proof, although I still remember that I had a clear comprehension of it, yet I may readily come to doubt of the truth demonstrated, if I do not know that there is a God: for I may persuade myself that I have been so constituted by nature as to be sometimes deceived, even in matters which I think I apprehend with the greatest evidence and certitude, especially when I recollect that I frequently considered many things to be true and certain which other reasons afterward constrained me to reckon as wholly false.

But after I have discovered that God exists, seeing I also at the same time observed that all things depend on him, and that he is no deceiver, and thence inferred that all which I clearly and distinctly perceive is of necessity true: although I no longer attend to the grounds of a judgment, no opposite reason can be alleged sufficient to lead me to doubt of its truth, provided only I remember that I once possessed a clear and distinct comprehension of it. My knowledge of it thus becomes true and certain. And this same knowledge extends likewise to whatever I remember to have formerly demonstrated, as the truths of geometry and the like: for what can be alleged against them to lead me to doubt of them? Will it be that my nature is such that I may be frequently deceived? But I already know that I cannot be deceived in judgments of the grounds of which I possess a clear knowledge. Will it be that I formerly deemed things to be true and certain which I afterward discovered to be false? But I had no clear and distinct knowledge of any of those things, and, being as yet ignorant of the rule by which I am assured of the truth of a judgment, I was led to give my assent to them on grounds which I afterward discovered were less strong than at the time I imagined them to be. What further objection, then, is there? Will it be said that perhaps I am dreaming (an objection I lately myself raised), or that all the thoughts of which I am now conscious have no more truth than the reveries of my dreams? But although, in truth, I should be dreaming, the rule still holds that all which is clearly presented to my intellect is indisputably true.

And thus I very clearly see that the certitude and truth of all science depends on the knowledge alone of the true God, insomuch that, before I knew him, I could have no perfect knowledge of any other thing. And now that I know him, I possess the means of acquiring a perfect knowledge respecting innumerable matters, as well relative to God himself and other intellectual objects as to corporeal nature, in so far as it is the object of pure mathematics [which do not consider whether it exists or not].

MEDITATION VI.

OF THE EXISTENCE OF MATERIAL THINGS, AND OF THE REAL DISTINCTION BETWEEN THE MIND AND BODY OF MAN.

THERE now only remains the inquiry as to whether material things exist. With regard to this question, I at least know with certainty that such things may exist, in as far as they constitute the object of the pure mathematics, since, regarding them in this aspect, I can conceive them clearly and distinctly. For there can be no doubt that God possesses the power of producing all the objects I am able distinctly to conceive, and I never considered anything impossible to him, unless when I experienced a contradiction in the attempt to conceive it aright. Further, the faculty of imagination which I possess, and of which I am conscious that I make use when

I apply myself to the consideration of material things, is sufficient to persuade me of their existence: for, when I attentively consider what imagination is, I find that it is simply a certain application of the cognitive faculty (*facultas cognoscitiva*) to a body which is immediately present to it, and which therefore exists.

And to render this quite clear, I remark, in the first place, the difference that subsists between imagination and pure intellection [or conception]. For example, when I imagine a triangle I not only conceive (*intelligo*) that it is a figure comprehended by three lines, but at the same time also I look upon (*intueor*) these three lines as present by the power and internal application of my mind (*acie mentis*), and this is what I call imagining. But if I desire to think of a chiliogon, I indeed rightly conceive that it is a figure composed of a thousand sides, as easily as I conceive that a triangle is a figure composed of only three sides; but I cannot imagine the thousand sides of a chiliogon as I do the three sides of a triangle, nor, so to speak, view them as present [with the eyes of my mind]. And although, in accordance with the habit I have of always imagining something when I think of corporeal things, it may happen that, in conceiving a chiliogon, I confusedly represent some figure to myself, yet it is quite evident that this is not a chiliogon, since it in no wise differs from that which I would represent to myself, if I were to think of a myriogon, or any other figure of many sides; nor would this representation be of any use in discovering and unfolding the properties that constitute the difference between a chiliogon and other polygons. But if the question turns on a pentagon, it is quite true that I can conceive its figure, as well as that of a chiliogon, without the aid of imagination; but I can likewise imagine it by applying the attention of my mind to its five sides, and at the same time to the area which they contain. Thus I observe that a special effort of mind is necessary to the act of imagination, which is not required to conceiving or understanding (*ad intelligendum*); and this special exertion of mind clearly shows the difference between imagination and pure intellection (*imaginatio et intellectio pura*). I remark, besides, that this power of imagination which I possess, in as far as it differs from the power of conceiving, is in no way necessary to my [nature or] essence, that is, to the essence of my mind; for although I did not possess it, I should still remain the same that I now am, from which it seems we may conclude that it depends on something different from the mind. And I easily understand that, if some body exists, with which my mind is so conjoined and united as to be able, as it were, to consider it when it chooses, it may thus imagine corporeal objects; so that this mode of thinking differs from pure intellection only in this respect, that the mind in conceiving turns in some way upon itself, and considers some one of the ideas it possesses within itself; but in imagining it turns toward the body, and contemplates in it some object conformed to the idea which it either of itself conceived or apprehended by sense. I easily understand, I say, that imagination may be thus formed, if it is true that there are bodies; and because I find no other obvious mode of explaining it, I thence, with probability, conjecture that they exist, but only with probability; and although I carefully examine all things, nevertheless I do not find that, from the distinct idea of corporeal nature I have in my imagination, I can necessarily infer the existence of any body.

But I am accustomed to imagine many other objects besides that corporeal nature which is the object of the pure mathematics, as, for example, colors, sounds, tastes, pain, and the like, although with less distinctness; and, inasmuch as I perceive these objects much better by the senses, through the medium of which and of memory, they seem to have reached the imagination, I believe that, in order the more advantageously to examine them, it is proper I should at the same time examine what sense-perception is, and inquire whether from those ideas that are apprehended by this mode of thinking (consciousness), I cannot obtain a certain proof of the existence of corporeal objects.

And, in the first place, I will recall to my mind the things I have hitherto held as true, because perceived by the senses, and the foundations upon which my belief in their truth rested; I will, in the second place, examine the reasons that afterward constrained me to doubt of them; and, finally, I will consider what of them I ought now to believe.

Firstly, then, I perceived that I had a head, hands, feet, and other members composing that body which I considered as part, or perhaps even as the whole, of myself. I perceived further, that that body was placed among many others, by which it was capable of being affected in diverse ways, both beneficial and hurtful; and what was beneficial I remarked by a certain sensation of pleasure, and what was hurtful by a sensation of pain. And besides this pleasure and pain, I was likewise conscious of hunger, thirst, and other appetites, as well as certain corporeal inclinations toward joy, sadness, anger, and similar passions. And, out of myself, besides the extension, figure, and motions of bodies, I likewise perceived in them hardness, heat, and the other tactile qualities, and, in addition, light, colors, odors, tastes, and sounds, the variety of which gave me the means of distinguishing the sky, the earth, the sea, and generally all the other bodies, from one another. And certainly, considering the ideas of all these qualities, which were presented to my mind, and which alone I properly and immediately perceived, it was not without reason that I thought I perceived certain objects wholly different from my thought, namely, bodies from which those ideas proceeded; for I was conscious that the ideas were presented to me without my consent being required, so that I could not perceive any object, however desirous I might be, unless it were present to the organ of sense; and it was wholly out of my power not to perceive it when it was thus present. And because the ideas I perceived by the senses were much more lively and clear, and even, in their own way, more distinct than any of those I could of myself frame by meditation, or which I found impressed on my memory, it seemed that they could not have proceeded from myself, and must therefore have been caused in me by some other objects; and as of those objects I had no knowledge beyond what the ideas themselves gave me, nothing was so likely to occur to my mind as the supposition that the objects were similar to the ideas which they caused. And because I recollected also that I had formerly trusted to the senses, rather than to reason, and that the ideas which I myself formed were not so clear as those I perceived by sense, and that they were even for the most part composed of parts of the latter, I was readily persuaded that I had no idea in my intellect which had not formerly passed through the senses. Nor was I altogether wrong in likewise believing that that body which, by a special right, I called my own, pertained to me more properly and strictly than any of the others; for in truth, I could never be separated from it as from other bodies; I felt in it and on account of it all my appetites and affections, and in fine I was affected in its parts by pain and the titillation of pleasure, and not in the parts of the other bodies that were separated from it. But when I inquired into the reason why, from this I know not what sensation of pain, sadness of mind should follow, and why from the sensation of pleasure, joy should arise, or why this indescribable twitching of the stomach, which I call hunger, should put me in mind of taking food, and the parchedness of the throat of drink, and so in other cases, I was unable to give any explanation, unless that I was so taught by nature; for there is assuredly no affinity, at least none that I am able to comprehend, between this irritation of the stomach and the desire of food, any more than between the perception of an object that causes pain and the consciousness of sadness which springs from the perception. And in the same way it seemed to me that all the other judgments I had formed regarding the objects of sense, were dictates of nature; because I remarked that those judgments were formed in me, before I had leisure to weigh and consider the reasons that might constrain me to form them.

But, afterward, a wide experience by degrees sapped the faith I had reposed in my senses; for I frequently observed that towers, which at a distance seemed round, appeared square, when more closely viewed, and that colossal figures, raised on the summits of these towers, looked like small statues, when viewed from the bottom of them; and, in other instances without number, I also discovered error in judgments founded on the external senses; and not only in those founded on the external, but even in those that rested on the internal senses; for is there aught more internal than pain? And yet I have sometimes been informed by parties whose arm or leg had been amputated, that they still occasionally seemed to feel pain in that part of the body which they had lost, — a circumstance that led me to think that I could not be quite certain even that any one of my members was affected when I felt pain in it. And to these grounds of doubt I shortly afterward also added two others of very wide generality: the first of them was that I believed I never perceived anything when awake which I could not occasionally think I also perceived when asleep, and as I do not believe that the ideas I seem to perceive in my sleep proceed from objects external to me, I did not any more observe any ground for believing this of such as I seem to perceive when awake; the second was that since I was as yet ignorant of the author of my being or at least supposed myself to be so, I saw nothing to prevent my having been so constituted by nature as that I should be deceived even in matters that appeared to me to possess the greatest truth. And, with respect to the grounds on which I had before been persuaded of the existence of sensible objects, I had no great difficulty in finding suitable answers to them; for as nature seemed to incline me to many things from which reason made me averse, I thought that I ought not to confide much in its teachings. And although the perceptions of the senses were not dependent on my will, I did not think that I ought on that ground to conclude that they proceeded from things different from myself, since perhaps there might be found in me some faculty, though hitherto unknown to me, which produced them.

But now that I begin to know myself better, and to discover more clearly the author of my being, I do not, indeed, think that I ought rashly to admit all which the senses seem to teach, nor, on the other hand, is it my conviction that I ought to doubt in general of their teachings.

And, firstly, because I know that all which I clearly and distinctly conceive can be produced by God exactly as I conceive it, it is sufficient that I am able clearly and distinctly to conceive one thing apart from another, in order to be certain that the one is different from the other, seeing they may at least be made to exist separately, by the omnipotence of God; and it matters not by what power this separation is made, in order to be compelled to judge them different; and, therefore, merely because I know with certitude that I exist, and because, in the meantime, I do not observe that aught necessarily belongs to my nature or essence beyond my being a thinking thing, I rightly conclude that my essence consists only in my being a thinking thing [or a substance whose whole essence or nature is merely thinking]. And although I may, or rather, as I will shortly say, although I certainly do possess a body with which I am very closely conjoined; nevertheless, because, on the one hand, I have a clear and distinct idea of myself, in as far as I am only a thinking and unextended thing, and as, on the other hand, I possess a distinct idea of body, in as far as it is only an extended and unthinking thing, it is certain that I, [that is, my mind, by which I am what I am], is entirely and truly distinct from my body, and may exist without it.

Moreover, I find in myself diverse faculties of thinking that have each their special mode: for example, I find I possess the faculties of imagining and perceiving, without which I can indeed clearly and distinctly conceive myself as entire, but I cannot reciprocally conceive them without conceiving myself, that is to say, without an intelligent substance in which they reside, for [in the notion we have of them, or to use the terms of the schools] in their formal concept, they comprise some sort of intellection; whence I perceive that they are distinct from myself as modes are from things. I remark likewise certain other faculties, as the power of changing place, of assuming diverse figures, and the like, that cannot be conceived and cannot therefore exist, any more than the preceding, apart from a substance in which they inhere. It is very evident, however, that these faculties, if they really exist, must belong to some corporeal or extended substance, since in their clear and distinct concept there is contained some sort of extension, but no intellection at all. Further, I cannot doubt but that there is in me a certain passive faculty of perception, that is, of receiving and taking knowledge of the ideas of sensible things; but this would be useless to me, if there did not also exist in me, or in some other thing, another active faculty capable of forming and producing those ideas. But this active faculty cannot be in me [in as far as I am but a thinking thing], seeing that it does not presuppose thought, and also that those ideas are frequently produced in my mind without my contributing to it in any way, and even frequently contrary to my will. This faculty must therefore exist in some substance different from me, in which all the objective reality of the ideas that are produced by this faculty, is contained formally or eminently, as I before remarked: and this substance is either a body, that is to say, a corporeal nature in which is contained formally [and in effect] all that is objectively [and by representation] in those ideas; or it is God himself, or some other creature, of a rank superior to body, in which the same is contained eminently. But as God is no deceiver, it is manifest that he does not of himself and immediately communicate those ideas to me, nor even by the intervention of any creature in which their objective reality is not formally, but only eminently, contained. For as he has given me no faculty whereby I can discover this to be the case, but, on the contrary, a very strong inclination to believe that those ideas arise from corporeal objects, I do not see how he could be vindicated from the charge of deceit, if in truth they proceeded from any other source, or were produced by other causes than corporeal things: and accordingly it must be concluded, that corporeal objects exist. Nevertheless, they are not perhaps exactly such as we perceive by the senses, for their comprehension by the senses is, in many instances, very obscure and confused; but it is at least necessary to admit that all which I clearly and distinctly conceive as in them, that is, generally speaking, all that is comprehended in the object of speculative geometry, really exists external to me.

But with respect to other things which are either only particular, as, for example, that the sun is of such a size and figure, etc., or are conceived with less clearness and distinctness, as light, sound, pain, and the like, although they are highly dubious and uncertain, nevertheless on the ground alone that God is no deceiver, and that consequently he has permitted no falsity in my opinions which he has not likewise given me a faculty of correcting, I think I may with safety conclude that I possess in myself the means of arriving at the truth. And, in the first place, it cannot be doubted that in each of the dictates of nature there is some truth: for by nature, considered in general, I now understand nothing more than God himself, or the order and disposition established by God in created things; and by my nature in particular I understand the assemblage of all that God has given me.

But there is nothing which that nature teaches me more expressly [or more sensibly] than that I have a body which is ill affected when I feel pain, and stands in need of food and drink when I experience the sensations of hunger and thirst, etc. And therefore I ought not to doubt but that there is some truth in these informations.

Nature likewise teaches me by these sensations of pain, hunger, thirst, etc., that I am not only lodged in my body as a pilot in a vessel, but that I am besides so intimately conjoined, and as it were intermixed with it, that my mind and body compose a certain unity. For if this were not the case, I should not feel pain when my body is hurt, seeing I am merely a thinking thing, but should perceive the wound by the understanding alone, just as a pilot perceives by sight when any part of his vessel is damaged; and when my body has need of food or drink, I should have a clear knowledge of this, and not be made aware of it by the confused sensations of hunger and thirst: for, in truth, all these sensations of hunger, thirst, pain, etc., are nothing more than certain confused modes of thinking, arising from the union and apparent fusion of mind and body.

Besides this, nature teaches me that my own body is surrounded by many other bodies, some of which I have to seek after, and others to shun. And indeed, as I perceive different sorts of colors, sounds, odors, tastes, heat, hardness, etc., I safely conclude that there are in the bodies from which the diverse perceptions of the senses proceed, certain varieties corresponding to them, although, perhaps, not in reality like them; and since, among these diverse perceptions of the senses, some are agreeable, and others disagreeable, there can be no doubt that my body, or rather my entire self, in as far as I am composed of body and mind, may be variously affected, both beneficially and hurtfully, by surrounding bodies.

But there are many other beliefs which though seemingly the teaching of nature, are not in reality so, but which obtained a place in my mind through a habit of judging inconsiderately of things. It may thus easily happen that such judgments shall contain error: thus, for example, the opinion I have that all space in which there is nothing to affect [or make an impression on] my senses is void; that in a hot body there is something in every respect similar to the idea of heat in my mind; that in a white or green body there is the same whiteness or greenness which I perceive; that in a bitter or sweet body there is the same taste, and so in other instances; that the stars, towers, and all distant bodies, are of the same size and figure as they appear to our eyes, etc. But that I may avoid everything like indistinctness of conception, I must accurately define what I properly understand by being taught by nature. For nature is here taken in a narrower sense than when it signifies the sum of all the things which God has given me; seeing that in that meaning the notion comprehends much that belongs only to the mind [to which I am not here to be understood as referring when I use the term nature]; as, for example, the notion I have of the truth, that what is done cannot be undone, and all the other truths I discern by the natural light [without the aid of the body]; and seeing that it comprehends likewise much besides that belongs only to body, and is not here any more contained under the name nature, as the quality of heaviness, and the like, of which I do not speak, the term being reserved exclusively to designate the things which God has given to me as a being composed of mind and body. But nature, taking the term in the sense explained, teaches me to shun what causes in me the sensation of pain, and to pursue what affords me the sensation of pleasure, and other things of this sort; but I do not discover that it teaches me, in addition to this, from these diverse perceptions of the senses, to draw any conclusions respecting external objects without a previous [careful and mature] consideration of them by the mind: for it is, as appears to me, the office of the mind alone, and not of the composite whole of mind and body, to discern the truth in those matters. Thus, although the impression a star makes on my eye is not larger than that from the flame of a candle, I do not, nevertheless, experience any real or positive impulse determining me to believe that the star is not greater than the flame; the true account of the matter being merely that I have so judged from my youth without any rational ground. And, though on approaching the fire I feel heat, and even pain on approaching it too closely, I have, however, from this no ground for holding that something resembling the heat I feel is in the fire, any more than that there is something similar to the pain; all that I have ground for believing is, that there is something in it, whatever it may be, which excites in me those sensations of heat or pain. So also, although there are spaces in which I find nothing to excite and affect my senses, I must not therefore conclude that those spaces contain in them no body; for I see that in this, as in many other similar matters, I have been accustomed to pervert the order of nature, because these perceptions of the senses, although given me by nature merely to signify to my mind what things are beneficial and hurtful to the composite whole of which it is a part, and being sufficiently clear and distinct for that purpose, are nevertheless used by me as infallible rules by which to determine immediately the essence of the bodies that exist out of me, of which they can of course afford me only the most obscure and confused knowledge.

But I have already sufficiently considered how it happens that, notwithstanding the supreme goodness of God, there is falsity in my judgments. A difficulty, however, here presents itself, respecting the things which I am taught by nature must be pursued or avoided, and also respecting the internal sensations in which I seem to have occasionally detected error, [and thus to be directly deceived by nature]: thus, for example, I may be so deceived by the agreeable taste of some viand with which poison has been mixed, as to be induced to take the poison. In this case, however, nature may be excused, for it simply leads me to desire the viand for its agreeable taste, and not the poison, which is unknown to it; and thus we can infer nothing from this circumstance beyond that our nature is not omniscient; at which there is assuredly no ground for surprise, since, man being of a finite nature, his knowledge must likewise be of a limited perfection. But we also not unfrequently err in that to which we are directly impelled by nature, as is the case with invalids who desire drink or food that would be hurtful to them. It will here, perhaps, be alleged that the reason why such persons are deceived is that their nature is corrupted; but this leaves the difficulty untouched, for a sick man is not less really the creature of God than a man who is in full health; and therefore it is as repugnant to the goodness of God that the nature of the former should be deceitful as it is for that of the latter to be so. And as a clock, composed of wheels and counter weights, observes not the less accurately all the laws of nature when it is ill made, and points out the hours incorrectly, than when it satisfies the desire of the maker in every respect; so likewise if the body of man be considered as a kind of machine, so made up and composed of bones, nerves, muscles, veins, blood, and skin, that although there were in it no mind, it would still exhibit the same motions which it at present manifests involuntarily, and therefore without the aid of the mind, [and simply by the dispositions of its organs], I easily discern that it would also be as natural for such a body, supposing it dropsical, for example, to experience the parchedness of the throat that is usually accompanied in the mind by the sensation of thirst, and to be disposed by this parchedness to move its nerves and its other parts in the way required for drinking, and thus increase its malady and do itself harm, as it is natural for it, when it is not indisposed to be stimulated to drink for its good by a similar cause; and although looking to the use for which a clock was destined by its maker, I may say that it is deflected from its proper nature when it incorrectly indicates the hours, and on the same principle, considering the machine of the human body as having been formed by God for the sake of the motions which it usually manifests, although I may likewise have ground for thinking that it does not follow the order of its nature when the throat is parched and drink does not tend to its preservation, nevertheless I yet plainly discern that this latter acceptation of the term nature is very different from the other: for this is nothing more than a certain denomination, depending entirely on my thought, and hence called extrinsic, by which I compare a sick man and an imperfectly constructed clock with the idea I have of a man in good health and a well made clock; while by the other acceptation of nature is understood something which is truly found in things, and therefore possessed of some truth.

But certainly, although in respect of a dropsical body, it is only by way of exterior denomination that we say its nature is corrupted, when, without requiring drink, the throat is parched; yet, in respect of the composite whole, that is, of the mind in its union with the body, it is not a pure denomination, but really an error of nature, for it to feel thirst when drink would be hurtful to it: and, accordingly, it still remains to be considered why it is that the goodness of God does not prevent the nature of man thus taken from being fallacious.

To commence this examination accordingly, I here remark, in the first place, that there is a vast difference between mind and body, in respect that body, from its nature, is always divisible, and that mind is entirely indivisible. For in truth, when I consider the mind, that is, when I consider myself in so far only as I am a thinking thing, I can distinguish in myself no parts, but I very clearly discern that I am somewhat absolutely one and entire; and although the whole mind seems to be united to the whole body, yet, when a foot, an arm, or any other part is cut off, I am conscious that nothing has been taken from my mind; nor can the faculties of willing, perceiving, conceiving, etc., properly be called its parts, for it is the same mind that is exercised [all entire] in willing, in perceiving, and in conceiving, etc. But quite the opposite holds in corporeal or extended things; for I cannot imagine any one of them [how small soever it may be], which I cannot easily sunder in thought, and which, therefore, I do not know to be divisible. This would be sufficient to teach me that the mind or soul of man is entirely different from the body, if I had not already been apprised of it on other grounds.

I remark, in the next place, that the mind does not immediately receive the impression from all the parts of the body, but only from the brain, or perhaps even from one small part of it, viz, that in which the common sense (*sensus communis*) is said to be, which as often as it is affected in the same way gives rise to the same perception in the mind, although meanwhile the other parts of the body may be diversely disposed, as is proved by innumerable experiments, which it is unnecessary here to enumerate.

I remark, besides, that the nature of body is such that none of its parts can be moved by another part a little removed from the other, which cannot likewise be moved in the same way by any one of the parts that lie between those two, although the most remote part does not act at all. As, for example, in the cord A, B, C, D, [which is in tension], if its last part D, be pulled, the first part A, will not be moved in a different way than it would be were one of the intermediate parts B or C to be pulled, and the last part D meanwhile to remain fixed. And in the same way, when I feel pain in the foot, the science of physics teaches me that this sensation is experienced by means of the nerves dispersed over the foot, which, extending like cords from it to the brain, when they are contracted in the foot, contract at the same time the inmost parts of the brain in which they have their origin, and excite in these parts a certain motion appointed by nature to cause in the mind a sensation of pain, as if existing in the foot; but as these nerves must pass through the tibia, the leg, the loins, the back, and neck, in order to reach the brain, it may happen that although their extremities in the foot are not affected, but only certain of their parts that pass through the loins or neck, the same movements, nevertheless, are excited in the brain by this motion as would have been caused there by a hurt received in the foot, and hence the mind will necessarily feel pain in the foot, just as if it had been hurt; and the same is true of all the other perceptions of our senses.

I remark, finally, that as each of the movements that are made in the part of the brain by which the mind is immediately affected, impresses it with but a single sensation, the most likely supposition in the circumstances is, that this movement causes the mind to experience, among all the sensations which it is capable of impressing upon it, that one which is the best fitted, and generally the most useful for the preservation of the human body when it is in full health. But experience shows us that all the perceptions which nature has given us are of such a kind as I have mentioned; and accordingly, there is nothing found in them that does not manifest the power and goodness of God. Thus, for example, when the nerves of the foot are violently or more than usually shaken, the motion passing through the medulla of the spine to the innermost parts of the brain affords a sign to the mind on which it experiences a sensation, viz., of pain, as if it were in the foot, by which the mind is admonished and excited to do its utmost to remove the cause of it as dangerous and hurtful to the foot. It is true that God could have so constituted the nature of man as that the same motion in the brain would have informed the mind of something altogether different: the motion might, for example, have been the occasion on which the mind became conscious of itself, in so far as it is in the brain, or in so far as it is in some place intermediate between the foot and the brain, or, finally, the occasion on which it perceived some other object quite different, whatever that might be; but nothing of all this would have so well contributed to the preservation of the body as that which the mind actually feels. In the same way, when we stand in need of drink, there arises from this want a certain parchedness in the throat that moves its nerves, and by means of them the internal parts of the brain; and this movement affects the mind with the sensation of thirst, because there is nothing on that occasion which is more useful for us than to be made aware that we have need of drink for the preservation of our health; and so in other instances.

Whence it is quite manifest that, notwithstanding the sovereign goodness of God, the nature of man, in so far as it is composed of mind and body, cannot but be sometimes fallacious. For, if there is any cause which excites, not in the foot, but in some one of the parts of the nerves that stretch from the foot to the brain, or even in the brain itself, the same movement that is ordinarily created when the foot is ill affected, pain will be felt, as it were, in the foot, and the sense will thus be naturally deceived; for as the same movement in the brain can but impress the mind with the same sensation, and as this sensation is much more frequently excited by a cause which hurts the foot than by one acting in a different quarter, it is reasonable that it should lead the mind to feel pain in the foot rather than in any other part of the body. And if it sometimes happens that the parchedness of the throat does not arise, as is usual, from drink being necessary for the health of the body, but from quite the opposite cause, as is the case with the dropsical, yet it is much better that it should be deceitful in that instance, than if, on the contrary, it were continually fallacious when the body is well-disposed; and the same holds true in other cases.

And certainly this consideration is of great service, not only in enabling me to recognize the errors to which my nature is liable, but likewise in rendering it more easy to avoid or correct them: for, knowing that all my senses more usually indicate to me what is true than what is false, in matters relating to the advantage of the body, and being able almost always to make use of more than a single sense in examining the same object, and besides this, being able to use my memory in connecting present with past knowledge, and my understanding which has already discovered all the causes of my errors, I ought no longer to fear that falsity may be met with in what is daily presented to me by the senses. And I ought to reject all the doubts of those bygone days, as hyperbolical and ridiculous, especially the general uncertainty respecting sleep, which I could not distinguish from the waking state: for I now find a very marked difference between the two states, in respect that our memory can never connect our dreams with each other and with the course of life, in the way it is in the habit of doing with events that occur when we are awake. And, in truth, if some one, when I am awake, appeared to me all of a sudden and as suddenly disappeared, as do the images I see in sleep, so that I could not observe either whence he came or whither he went, I should not without reason esteem it either a specter or phantom formed in my brain, rather than a real man. But when I perceive objects with regard to which I can distinctly determine both the place whence they come, and that in which they are, and the time at which they appear to me, and when, without interruption, I can connect the perception I have of them with the whole of the other parts of my life, I am perfectly sure that what I thus perceive occurs while I am awake and not during sleep. And I ought not in the least degree to doubt of the truth of these presentations, if, after having called together all my senses, my memory, and my understanding for the purpose of examining them, no deliverance is given by any one of these faculties which is repugnant to that of any other: for since God is no deceiver, it necessarily follows that I am not herein deceived. But because the necessities of action frequently oblige us to come to a determination before we have had leisure for so careful an examination, it must be confessed that the life of man is frequently obnoxious to error with respect to individual objects; and we must, in conclusion, acknowledge the weakness of our nature.

SELECTIONS

FROM

THE PRINCIPLES OF PHILOSOPHY

OF

DESCARTES

TRANSLATED FROM THE LATIN AND COLLATED
WITH THE FRENCH

LETTER OF THE AUTHOR

TO THE

FRENCH TRANSLATOR OF THE PRINCIPLES OF PHILOSOPHY SERVING FOR A PREFACE.

SIR: — The version of my Principles which you have been at pains to make, is so elegant and finished as to lead me to expect that the work will be more generally read in French than in Latin, and better understood. The only apprehension I entertain is lest the title should deter some who have not been brought up to letters, or with whom philosophy is in bad repute, because the kind they were taught has proved unsatisfactory; and this makes me think that it will be useful to add a preface to it for the purpose of showing what the MATTER of the work is, what END I had in view in writing it, and what UTILITY may be derived from it. But although it might be my part to write a preface of this nature, seeing I ought to know those particulars better than any other person, I cannot, nevertheless, prevail upon myself to do anything more than merely to give a summary of the chief points that fall, as I think, to be discussed in it: and I leave it to your discretion to present to the public such part of them as you shall judge proper.

I should have desired, in the first place, to explain in it what philosophy is, by commencing with the most common matters, as, for example, that the word PHILOSOPHY signifies the study of wisdom, and that by wisdom is to be understood not merely prudence in the management of affairs, but a perfect knowledge of all that man can know, as well for the conduct of his life as for the preservation of his health and the discovery of all the arts, and that knowledge to subserve these ends must necessarily be deduced from first causes; so that in order to study the acquisition of it (which is properly called phi losophizing), we must commence with the investigation of those first causes which are called PRINCIPLES. Now these principles must possess TWO CONDITIONS: in the first place, they must be so clear and evident that the human mind, when it attentively considers them, cannot doubt of their truth; in the second place, the knowledge of other things must be so dependent on them as that though the principles themselves may indeed be known apart from what depends on them, the latter cannot, nevertheless, be known apart from the former. It will accordingly be necessary thereafter to endeavor so to deduce from those principles the knowledge of the things that depend on them, as that there may be nothing in the whole series of deductions which is not perfectly manifest. God is in truth the only being who is absolutely wise, that is, who possesses a perfect knowledge of all things; but we may say that men are more or less wise as their knowledge of the most important truths is greater or less. And I am confident that there is nothing, in what I have now said, in which all the learned do not concur.

I should, in the next place, have proposed to consider the utility of philosophy, and at the same time have shown that, since it embraces all that the human mind can know, we ought to believe that it is by it we are distinguished from savages and barbarians, and that the civilization and culture of a nation is regulated by the degree in which true philosophy flourishes in it, and, accordingly, that to contain true philosophers is the highest privilege a state can enjoy. Besides this, I should have shown that, as regards individuals, it is not only useful for each man to have intercourse with those who apply themselves to this study, but that it is incomparably better he should himself direct his attention to it; just as it is doubtless to be preferred that a man should make use of his own eyes to direct his steps, and enjoy by means of the same the beauties of color and light, than that he should blindly follow the guidance of another; though the latter course is certainly better than to have the eyes closed with no guide except one's self. But to live without philosophizing is in truth the same as keeping the eyes closed without attempting to open them; and the pleasure of seeing all that sight discloses is not to be compared with the satisfaction afforded by the discoveries of philosophy. And, finally, this study is more imperatively requisite for the regulation of our manners, and for conducting us through life, than is the use of our eyes for directing our steps. The brutes, which have only their bodies to conserve, are continually occupied in seeking sources of nourishment; but men, of whom the chief part is the mind, ought to make the search after wisdom their principal care, for wisdom is the true nourishment of the mind; and I feel assured, moreover, that there are very many who would not fail in the search, if they would but hope for success in it, and knew the degree of their capabilities for it. There is no mind, how ignoble soever it be, which remains so firmly bound up in the objects of the senses, as not sometime or other to turn itself away from them in the aspiration after some higher good, although not knowing frequently wherein that good consists. The greatest favorites of fortune — those who have health, honors, and riches in abundance — are not more exempt from aspirations of this nature than others; nay, I am persuaded that these are the persons who sigh the most deeply after another good greater and more perfect still than any they already possess. But the supreme good, considered by natural reason without the light of faith, is nothing more than the knowledge of truth through its first causes, in other words, the wisdom of which philosophy is the study. And, as all these particulars are indisputably true, all that is required to gain assent to their truth is that they be well stated.

But as one is restrained from assenting to these doctrines by experience, which shows that they who make pretensions to philosophy are often less wise and reasonable than others who never applied themselves to the study, I should have here shortly explained wherein consists all the science we now possess, and what are the degrees of wisdom at which we have arrived. The first degree contains only notions so clear of themselves that they can be acquired without meditation; the second comprehends all that the experience of the senses dictates; the third, that which the conversation of other men teaches us; to which may be added as the fourth, the reading, not of all books, but especially of such as have been written by persons capable of conveying proper instruction, for it is a species of conversation we hold with their authors. And it seems to me that all the wisdom we in ordinary possess is acquired only in these four ways; for I do not class divine revelation among them, because it does not conduct us by degrees, but elevates us at once to an infallible faith.

There have been, indeed, in all ages great minds who endeavored to find a fifth road to wisdom, incomparably more sure and elevated than the other four. The path they assayed was the search of first causes and true principles, from which might be deduced the reasons of all that can be known by man; and it is to them the appellation of philosophers has been more especially accorded. I am not aware that there is any one of them up to the present who has succeeded in this enterprise. The first and chief whose writings we possess, are Plato and Aristotle, between whom there was no difference, except that the former, following in the footsteps of his master, Socrates, ingenuously confessed that he had never yet been able to find anything certain, and that he was contented to write what seemed to him probable, imagining, for this end, certain principles by which he endeavored to account for the other things. Aristotle, on the other hand, characterized by less candor, although for twenty years the disciple of Plato, and with no principles beyond those of his master, completely reversed his mode of putting them, and proposed as true and certain what it is probable he himself never esteemed as such. But these two men had acquired much judgment and wisdom by the four preceding means, qualities which raised their authority very high, so much so that those who succeeded them were willing rather to acquiesce in their opinions, than to seek better for themselves. The chief question among their disciples, however, was as to whether we ought to doubt of all things or hold some as certain, a dispute which led them on both sides into extravagant errors; for a part of those who were for doubt, extended it even to the actions of life, to the neglect of the most ordinary rules required for its conduct; those, on the other hand, who maintained the doctrine of certainty, supposing that it must depend upon the senses, trusted entirely to them. To such an extent was this carried by Epicurus, that it is said he ventured to affirm, contrary to all the reasonings of the astronomers, that the sun is no larger than it appears.

It is a fault we may remark in most disputes, that, as truth is the mean between the two opinions that are upheld, each disputant departs from it in proportion to the degree in which he possesses the spirit of contradiction. But the error of those who leant too much to the side of doubt, was not followed for any length of time, and that of the opposite party has been to some extent corrected by the doctrine that the senses are deceitful in many instances. Nevertheless, I do not know that this error was wholly removed by showing that certitude is not in the senses, but in the understanding alone when it has clear perceptions; and that while we only possess the knowledge which is acquired in the first four grades of wisdom, we ought not to doubt of the things that appear to be true in what regards the conduct of life, nor esteem them as so certain that we cannot change our opinions regarding them, even though constrained by the evidence of reason.

From ignorance of this truth, or, if there was anyone to whom it was known, from neglect of it, the majority of those who in these latter ages aspired to be philosophers, blindly followed Aristotle, so that they frequently corrupted the sense of his writings, and attributed to him various opinions which he would not recognize as his own were he now to return to the world; and those who did not follow him, among whom are to be found many of the greatest minds, did yet not escape being imbued with his opinions in their youth, as these form the staple of instruction in the schools; and thus their minds were so preoccupied that they could not rise to the knowledge of true principles. And though I hold all the philosophers in esteem, and am unwilling to incur odium by my censure, I can adduce a proof of my assertion, which I do not think any of them will gainsay, which is, that they all laid down as a principle what they did not perfectly know. For example, I know none of them who did not suppose that there was gravity in terrestrial bodies; but although experience shows us very clearly that bodies we call heavy descend toward the center of the earth, we do not, therefore, know the nature of gravity, that is, the cause or principle in virtue of which bodies descend, and we must derive our knowledge of it from some other source. The same may be said of a vacuum and atoms, of heat and cold, of dryness and humidity, and of salt, sulphur, and mercury, and the other things of this sort which some have adopted as their principles. But no conclusion deduced from a principle which is not clear can be evident, even although the deduction be formally valid; and hence it follows that no reasonings based on such principles could lead them to the certain knowledge of any one thing, nor consequently advance them one step in the search after wisdom. And if they did discover any truth, this was due to one or other of the four means above mentioned. Notwithstanding this, I am in no degree desirous to lessen the honor which each of them can justly claim; I am only constrained to say, for the consolation of those who have not given their attention to study, that just as in traveling, when we turn our back upon the place to which we are going, we recede the farther from it in proportion as we proceed in the new direction for a greater length of time and with greater speed, so that, though we may be afterward brought back to the right way, we cannot nevertheless arrive at the destined place as soon as if we had not moved backward at all; so in philosophy, when we make use of false principles, we depart the farther from the knowledge of truth and wisdom exactly in proportion to the care with which we cultivate them, and apply ourselves to the deduction of diverse consequences from them, thinking that we are philosophizing well, while we are only departing the farther from the truth; from which it must be inferred that they who have learned the least of all that has been hitherto distinguished by the name of philosophy are the most fitted for the apprehension of truth.

After making those matters clear, I should, in the next place, have desired to set forth the grounds for holding that the true principles by which we may reach that highest degree of wisdom wherein consists the sovereign good of human life, are those I have proposed in this work; and two considerations alone are sufficient to establish this — the first of which is, that these principles are very clear, and the second, that we can deduce all other truths from them; for it is only these two conditions that are required in true principles. But I easily prove that they are very clear; firstly, by a reference to the manner in which I found them, namely, by rejecting all propositions that were in the least doubtful, for it is certain that such as could not be rejected by this test when they were attentively considered, are the most evident and clear which the human mind can know. Thus by considering that he who strives to doubt of all is unable, nevertheless, to doubt that he is while he doubts, and that what reasons thus, in not being able to doubt of itself and doubting, nevertheless, of everything else, is not that which we call our body, but what we name our mind or thought, I have taken the existence of this thought for the first principle, from which I very clearly deduce the following truths, namely, that there is a God who is the author of all that is in the world, and who, being the source of all truth, cannot have created our understanding of such a nature as to be deceived in the judgments it forms of the things of which it possesses a very clear and distinct perception. Those are all the principles of which I avail myself touching immaterial or metaphysical objects, from which I most clearly deduce these other principles of physical or corporeal things, namely, that there are bodies extended in length, breadth, and depth, which are of diverse figures and are moved in a variety of ways. Such are in sum the principles from which I deduce all other truths. The second circumstance that proves the clearness of these principles is, that they have been known in all ages, and even received as true and indubitable by all men, with the exception only of the existence of God, which has been doubted by some, because they attributed too much to the perceptions of the senses, and God can neither be seen nor touched.

But, though all the truths which I class among my principles were known at all times, and by all men, nevertheless, there has been no one up to the present, who, so far as I know, has adopted them as principles of philosophy: in other words, as such that we can deduce from them the knowledge of whatever else is in the world. It accordingly now remains for me to prove that they are such; and it appears to me that I cannot better establish this than by the test of experience: in other words, by inviting readers to peruse the following work. For, though I have not treated in it of all matters — that being impossible — I think I have so explained all of which I had occasion to treat, that they who read it attentively will have ground for the persuasion that it is unnecessary to seek for any other principles than those I have given, in order to arrive at the most exalted knowledge of which the mind of man is capable; especially if, after the perusal of my writings, they take the trouble to consider how many diverse questions are therein discussed and explained, and, referring to the writings of others, they see how little probability there is in the reasons that are adduced in explanation of the same questions by principles different from mine. And that they may the more easily undertake this, I might have said that those imbued with my doctrines have much less difficulty in comprehending the writings of others, and estimating their true value, than those who have not been so imbued; and this is precisely the opposite of what I before said of such as commenced with the ancient philosophy, namely, that the more they have studied it the less fit are they for rightly apprehending the truth.

I should also have added a word of advice regarding the manner of reading this work, which is, that I should wish the reader at first to go over the whole of it, as he would a romance, without greatly straining his attention, or tarrying at the difficulties he may perhaps meet with in it, with the view simply of knowing in general the matters of which I treat; and that afterward, if they seem to him to merit a more careful examination, and he feel a desire to know their causes, he may read it a second time, in order to observe the connection of my reasonings; but that he must not then give up in despair, although he may not everywhere sufficiently discover the connection of the proof, or understand all the reasonings — it being only necessary to mark with a pen the places where the difficulties occur, and continue to read without interruption to the end; then if he does not grudge to take up the book a third time, I am confident he will find in a fresh perusal the solution of most of the difficulties he will have marked before; and that, if any still remain, their solution will in the end be found in another reading.

I have observed, on examining the natural constitutions of different minds, that there are hardly any so dull or slow of understanding as to be incapable of apprehending good opinions, or even of acquiring all the highest sciences if they be but conducted along the right road. And this can also be proved by reason; for as the principles are clear, and as nothing ought to be deduced from them, unless most manifest inferences, no one is so devoid of intelligence as to be unable to comprehend the conclusions that flow from them. But, besides the entanglement of prejudices, from which no one is entirely exempt, although it is they who have been the most ardent students of the false sciences that receive the greatest detriment from them, it happens very generally that people of ordinary capacity neglect to study from a conviction that they want ability, and that others, who are more ardent, press on too rapidly: whence it comes to pass that they frequently admit principles far from evident, and draw doubtful inferences from them. For this reason, I should wish to assure those who are too distrustful of their own ability that there is nothing in my writings which they may not entirely understand, if they only take the trouble to examine them; and I should wish, at the same time, to warn those of an opposite tendency that even the most superior minds will have need of much time and attention to remark all I designed to embrace therein.

After this, that I might lead men to understand the real design I had in publishing them, I should have wished here to explain the order which it seems to me one ought to follow with the view of instructing himself. In the first place, a man who has merely the vulgar and imperfect knowledge which can be acquired by the four means above explained, ought, before all else, to endeavor to form for himself a code of morals sufficient to regulate the actions of his life, as well for the reason that this does not admit of delay as because it ought to be our first care to live well. In the next place, he ought to study Logic, not that of the schools, for it is only, properly speaking, a dialectic which teaches the mode of expounding to others what we already know, or even of speaking much, without judgment, of what we do not know, by which means it corrupts rather than increases good sense — but the logic which teaches the right conduct of the reason with the view of discovering the truths of which we are ignorant; and, because it greatly depends on usage, it is desirable he should exercise himself for a length of time in practicing its rules on easy and simple questions, as those of the mathematics. Then, when he has acquired some skill in discovering the truth in these questions, he should commence to apply himself in earnest to true philosophy, of which the first part is Metaphysics, containing the principles of knowledge, among which is the explication of the principal attributes of God, of the immateriality of the soul, and of all the clear and simple notions that are in us; the second is Physics, in which, after finding the true principles of material things, we examine, in general, how the whole universe has been framed; in the next place, we consider, in particular, the nature of the earth, and of all the bodies that are most generally found upon it, as air, water, fire, the loadstone and other minerals. In the next place, it is necessary also to examine singly the nature of plants, of animals, and above all of man, in order that we may thereafter be able to discover the other sciences that are useful to us. Thus, all Philosophy is like a tree, of which Metaphysics is the root, Physics the trunk, and all the other sciences the branches that grow out of this trunk, which are reduced to three principal, namely, Medicine, Mechanics, and Ethics. By the science of Morals, I understand the highest and most perfect which, presupposing an entire knowledge of the other sciences, is the last degree of wisdom.

But as it is not from the roots or the trunks of trees that we gather the fruit, but only from the extremities of their branches, so the principal utility of philosophy depends on the separate uses of its parts, which we can only learn last of all. But, though I am ignorant of almost all these, the zeal I have always felt in endeavoring to be of service to the public, was the reason why I published, some ten or twelve years ago, certain Essays on the doctrines I thought I had acquired. The first part of these Essays was a «Discourse on the Method of rightly conducting the Reason, and seeking Truth in the Sciences,» in which I gave a summary of the principal rules of logic, and also of an imperfect ethic, which a person may follow provisionally so long as he does not know any better. The other parts were three treatises: the first of Dioptrics, the second of Meteors, and the third of Geometry. In the Dioptrics, I designed to show that we might proceed far enough in philosophy as to arrive, by its means, at the knowledge of the arts that are useful to life, because the invention of the telescope, of which I there gave an explanation, is one of the most difficult that has ever been made. In the treatise of Meteors, I desired to exhibit the difference that subsists between the philosophy I cultivate and that taught in the schools, in which the same matters are usually discussed. In fine, in the Geometry, I professed to demonstrate that I had discovered many things that were before unknown, and thus afford ground for believing that we may still discover many others, with the view of thus stimulating all to the investigation of truth. Since that period, anticipating the difficulty which many would experience in apprehending the foundations of the Metaphysics, I endeavored to explain the chief points of them in a book of Meditations, which is not in itself large, but the size of which has been increased, and the matter greatly illustrated, by the Objections which several very learned persons sent to me on occasion of it, and by the Replies which I made to them. At length, after it appeared to me that those preceding treatises had sufficiently prepared the minds of my readers for the « Principles of Philosophy, » I also published it; and I have divided this work into four parts, the first of which contains the principles of human knowledge, and which may be called the First Philosophy, or Metaphysics. That this part, accordingly, may be properly understood, it will be necessary to read beforehand the book of Meditations I wrote on the same subject. The other three parts contain all that is most general in Physics, namely, the explication of the first laws or principles of nature, and the way in which the heavens, the fixed stars, the planets, comets, and generally the whole universe, were composed; in the next place, the explication, in particular, of the nature of this earth, the air, water, fire, the magnet, which are the bodies we most commonly find everywhere around it, and of all the qualities we observe in these bodies, as light, heat, gravity, and the like. In this way, it seems to me, I have commenced the orderly explanation of the whole of philosophy, without omitting any of the matters that ought to precede the last which I discussed.

But to bring this undertaking to its conclusion, I ought hereafter to explain, in the same manner, the nature of the other more particular bodies that are on the earth, namely, minerals, plants, animals, and especially man; finally to treat thereafter with accuracy of Medicine, Ethics, and Mechanics. I should require to do this in order to give to the world a complete body of philosophy; and I do not yet feel myself so old, I do not so much distrust my strength, nor do I find myself so far removed from the knowledge of what remains, as that I should not dare to undertake to complete this design, provided I were in a position to make all the experiments which I should require for the basis and verification of my reasonings. But seeing that would demand a great expenditure, to which the resources of a private individual like myself would not be adequate, unless aided by the public, and as I have no ground to expect this aid, I believe that I ought for the future to content myself with studying for my own instruction, and posterity will excuse me if I fail hereafter to labor for them.

Meanwhile, that it may be seen wherein I think I have already promoted the general good, I will here mention the fruits that may be gathered from my Principles. The first is the satisfaction which the mind will experience on finding in the work many truths before unknown; for although frequently truth does not so greatly affect our imagination as falsity and fiction, because it seems less wonderful and is more simple, yet the gratification it affords is always more durable and solid. The second fruit is, that in studying these principles we will become accustomed by degrees to judge better of all the things we come in contact with, and thus be made wiser, in which respect the effect will be quite the opposite to the common philosophy, for we may easily remark in those we call pedants that it renders them less capable of rightly exercising their reason than they would have been if they had never known it. The third is, that the truths which they contain, being highly clear and certain, will take away all ground of dispute, and thus dispose men's minds to gentleness and concord; whereas the contrary is the effect of the controversies of the schools, which, as they insensibly render those who are exercised in them more wrangling and opinionative, are perhaps the prime cause of the heresies and dissensions that now harass the world. The last and chief fruit of these Principles is, that one will be able, by cultivating them, to discover many truths I myself have not unfolded, and thus passing by degrees from one to another, to acquire in course of time a perfect knowledge of the whole of philosophy, and to rise to the highest degree of wisdom. For just as all the arts, though in their beginnings they are rude and imperfect, are yet gradually perfected by practice, from their containing at first something true, and whose effect experience evinces; so in philosophy, when we have true principles, we cannot fail by following them to meet sometimes with other truths; and we could not better prove the falsity of those of Aristotle, than by saying that men made no progress in knowledge by their means during the many ages they prosecuted them.

I well know that there are some men so precipitate and accustomed to use so little circumspection in what they do, that, even with the most solid foundations, they could not rear a firm superstructure; and as it is usually those who are the readiest to make books, they would in a short time mar all that I have done, and introduce uncertainty and doubt into my manner of philosophizing, from which I have carefully endeavored to banish them, if people were to receive their writings as mine, or as representing my opinions. I had, not long ago, some experience of this in one of those who were believed desirous of following me the most closely, and one too of whom I had somewhere said that I had such confidence in his genius as to believe that he adhered to no opinions which I should not be ready to avow as mine; for he last year published a book entitled « Fundamenta Physicæ,» in which, although he seems to have written nothing on the subject of Physics and Medicine which he did not take from my writings, as well from those I have published as from another still imperfect on the nature of animals, which fell into his hands; nevertheless, because he has copied them badly, and changed the order, and denied certain metaphysical truths upon which all Physics ought to be based, I am obliged wholly to disavow his work, and here to request readers not to attribute to me any opinion unless they find it expressly stated in my own writings, and to receive no opinion as true, whether in my writings or elsewhere, unless they see that it is very clearly deduced from true principles.

I well know, likewise, that many ages may elapse ere all the truths deducible from these principles are evolved out of them, as well because the greater number of such as remain to be discovered depend on certain particular experiments that never occur by chance, but which require to be investigated with care and expense by men of the highest intelligence, as because it will hardly happen that the same persons who have the sagacity to make a right use of them, will possess also the means of making them, and also because the majority of the best minds have formed so low an estimate of philosophy in general, from the imperfections they have remarked in the kind in vogue up to the present time, that they cannot apply themselves to the search after truth.

But in conclusion, if the difference discernible between the principles in question and those of every other system, and the great array of truths deducible from them, lead them to discern the importance of continuing the search after these truths, and to observe the degree of wisdom, the perfection and felicity of life, to which they are fitted to conduct us, I venture to believe that there will not be found one who is not ready to labor hard in so profitable a study, or at least to favor and aid with all his might those who shall devote themselves to it with success.

The height of my wishes is, that posterity may sometime behold the happy issue of it, etc.

TO THE MOST SERENE PRINCESS,

ELISABETH,

Eldest Daughter of Frederick, King of Bohemia, Count Palatine, and Elector of the Sacred Roman Empire.

Madam,—The greatest advantage I have derived from the writings which I have already published, has arisen from my having, through means of them, become known to your Highness, and thus been privileged to hold occasional converse with one in whom so many rare and estimable qualities are united, as to lead me to believe I should do service to the public by proposing them as an example to posterity. It would ill become me to flatter, or to give expression to anything of which I had no certain knowledge, especially in the first pages of a work in which I aim at laying down the principles of truth. And the generous modesty that is conspicuous in all your actions, assures me that the frank and simple judgment of a man who only writes what he believes will be more agreeable to you than the ornate laudations of those who have studied the art of compliment. For this reason, I will give insertion to nothing in this letter for which I have not the certainty both of experience and reason; and in the exordium, as in the rest of the work, I will write only as becomes a philosopher. There is a vast difference between real and apparent virtues; and there is also a great discrepancy between those real virtues that proceed from an accurate knowledge of the truth, and such as are accompanied with ignorance or error. The virtues I call apparent are only, properly speaking, vices, which, as they are less frequent than the vices that are opposed to them, and are farther removed from them than the intermediate virtues, are usually held in higher esteem than those virtues. Thus, because those who fear dangers too much are more numerous than they who fear them too little, temerity is frequently opposed to the vice of timidity, and taken for a virtue, and is commonly more highly esteemed than true fortitude. Thus, also, the prodigal are in ordinary more praised than the liberal; and none more easily acquire a great reputation for piety than the superstitious and hypocritical. With regard to true virtues, these do not all proceed from true knowledge, for there are some that likewise spring from defect or error: thus, simplicity is frequently the source of goodness, fear of devotion, and despair of courage. The virtues that are thus accompanied with some imperfections differ from each other, and have received diverse appellations. But those pure and perfect virtues that arise from the knowledge of good alone, are all of the same nature, and may be comprised under the single term wisdom. For, whoever owns the firm and constant resolution of always using his reason as well as lies in his power, and in all his actions of doing what he judges to be best, is truly wise, as far as his nature permits; and by this alone he is just, courageous, temperate, and possesses all the other virtues, but so well balanced as that none of them appears more prominent than another: and for this reason, although they are much more perfect than the virtues that blaze forth through the mixture of some defect, yet, because the crowd thus observes them less, they are not usually extolled so highly. Besides, of the two things that are requisite for the wisdom thus described, namely, the perception of the understanding and the disposition of the will, it is only that which lies in the will which all men can possess equally, inasmuch as the understanding of some is inferior to that of others. But although those who have only an inferior understanding may be as perfectly wise as their nature permits, and may render themselves highly acceptable to God by their virtue, provided they preserve always a firm and constant resolution to do all that they shall judge to be right, and to omit nothing that may lead them to the knowledge of the duties of which they are ignorant; nevertheless, those who preserve a constant resolution of performing the right, and are especially careful in instructing themselves, and who possess also a highly perspicacious intellect, arrive doubtless at a higher degree of wisdom than others; and I see that these three particulars are found in great perfection in your Highness. For, in the first place, your desire of self-instruction is manifest, from the circumstance that neither the amusements of the court, nor the accustomed mode of educating ladies, which ordinarily condemns them to ignorance, have been sufficient to prevent you from studying with much care all that is best in the arts and sciences; and the incomparable perspicacity of your intellect is evinced by this, that you penetrated the secrets of the sciences and acquired an accurate knowledge of them in a very short period. But of the vigor of your intellect I have a still stronger proof, and one peculiar to myself, in that I have never yet met any one who understood so generally and so well as yourself all that is contained in my writings. For there are several, even among men of the highest intellect and learning, who find them very obscure. And I remark, in almost all those who are versant in Metaphysics, that they are wholly disinclined from Geometry; and, on the other hand, that the cultivators of Geometry have no ability for the investigations of the First Philosophy: insomuch that I can say with truth I know but one mind, and that is your own, to which both studies are alike congenial, and which I therefore, with propriety, designate incomparable. But what most of all enhances my admiration is, that so accurate and varied an acquaintance with the whole circle of the sciences is not found in some aged doctor who has employed many years in contemplation, but in a Princess still young, and whose countenance and years would more fitly represent one of the Graces than a Muse or the sage Minerva. In conclusion, I not only remark in your Highness all that is requisite on the part of the mind to perfect and sublime wisdom, but also all that can be required on the part of the will or the manners, in which benignity and gentleness are so conjoined with majesty that, though fortune has attacked you with continued injustice, it has failed either to irritate or crush you. And this constrains me to such veneration that I not only think this work due to you, since it treats of philosophy which is the study of wisdom, but likewise feel not more zeal for my reputation as a philosopher than pleasure in subscribing myself,

Of your most Serene Highness,
The most devoted servant,
DESCARTES.

THE PRINCIPLES OF PHILOSOPHY.

PART I.

Of the Principles of Human Knowledge.

I. That in order to seek truth, it is necessary once in the course of our life, to doubt, as far as possible, of all things.

As we were at one time children, and as we formed various judgments regarding the objects presented to our senses, when as yet we had not the entire use of our reason, numerous prejudices stand in the way of our arriving at the knowledge of truth; and of these it seems impossible for us to rid ourselves, unless we undertake, once in our lifetime, to doubt all of those things in which we may discover even the smallest suspicion of uncertainty.

II. That we ought also to consider as false all that is doubtful.

Moreover, it will be useful likewise to esteem as false the things of which we shall be able to doubt, that we may with greater clearness discover what possesses most certainty and is the easiest to know.

III. That we ought not meanwhile to make use of doubt in the conduct of life.

In the meantime, it is to be observed that we are to avail ourselves of this general doubt only while engaged in the contemplation of truth. For, as far as concerns the conduct of life, we are very frequently obliged to follow opinions merely probable, or even sometimes, though of two courses of action we may not perceive more probability in the one than in the other, to choose one or other, seeing the opportunity of acting would not unfrequently pass away before we could free ourselves from our doubts.

IV. Why we may doubt of sensible things.

Accordingly, since we now only design to apply ourselves to the investigation of truth, we will doubt, first, whether of all the things that have ever fallen under our senses, or which we have ever imagined, any one really exist; in the first place, because we know by experience that the senses sometimes err, and it would be imprudent to trust too much to what has even once deceived us; secondly, because in dreams we perpetually seem to perceive or imagine innumerable objects which have no existence. And to one who has thus resolved upon a general doubt, there appear no marks by which he can with certainty distinguish sleep from the waking state.

V. Why we may also doubt of mathematical demonstrations.

We will also doubt of the other things we have before held as most certain, even of the demonstrations of mathematics, and of their principles which we have hitherto deemed self-evident; in the first place, because we have sometimes seen men fall into error in such matters, and admit as absolutely certain and self-evident what to us appeared false, but chiefly because we have learned that God who created us is all-powerful; for we do not yet know whether perhaps it was his will to create us so that we are always deceived, even in the things we think we know best; since this does not appear more impossible than our being occasionally deceived, which, however, as observation teaches us, is the case. And if we suppose that an all-powerful God is not the author of our being, and that we exist of ourselves or by some other means, still, the less powerful we suppose our author to be, the greater reason will we have for believing that we are not so perfect as that we may not be continually deceived.

VI. That we possess a free will, by which we can withhold our assent from what is doubtful, and thus avoid error.

But meanwhile, whoever in the end may be the author of our being, and however powerful and deceitfnl he may be, we are nevertheless conscious of a freedom, by which we can refrain from admitting to a place in our belief aught that is not manifestly certain and undoubted, and thus guard against ever being deceived.

VII. That we cannot doubt of our existence while we doubt, and that this is the first knowledge we acquire when we philosophize in order.

While we thus reject all of which we can entertain the smallest doubt, and even imagine that it is false, we easily indeed suppose that there is neither God, nor sky, nor bodies, and that we ourselves even have neither hands nor feet, nor, finally, a body; but we cannot in the same way suppose that we are not while we doubt of the truth of these things; for there is a repugnance in conceiving that what thinks does not exist at the very time when it thinks. Accordingly, the knowledge, I THINK, THEREFORE I AM, is the first and most certain that occurs to one who philosophizes orderly.

VIII. That we hence discover the distinction between the mind and the body, or between a thinking and corporeal thing.

And this is the best mode of discovering the nature of the mind, and its distinctness from the body: for examining what we are, while supposing, as we now do, that there is nothing really existing apart from our thought, we clearly perceive that neither extension, nor figure, nor local motion,* nor anything similar that can be attributed to body, pertains to our nature, and nothing save thought alone; and, consequently, that the notion we have of our mind precedes that of any corporeal thing, and is more certain, seeing we still doubt whether there is any body in existence, while we already perceive that we think.

IX. What thought (*cogitatio*) is.

By the word thought, I understand all that which so takes place in us that we of ourselves are immediately conscious of it; and, accordingly, not only to understand (*intelligere*, *entendre*), to will (*velle*), to imagine (*imaginari*), but even to perceive (*sentire*, *sentir*), are here the same as to think (*cogitare*, *penser*). For if I say, I see, or, I walk, therefore I am; and if I understand by vision or walking the act of my eyes or of my limbs, which is the work of the body, the conclusion is not absolutely certain, because, as is often the case in dreams, I may think that I see or walk, although I do not open my eyes or move from my place, and even, perhaps, although I have no body: but, if I mean the sensation itself, or consciousness of seeing or walking, the knowledge is manifestly certain, because it is then referred to the mind, which alone perceives or is conscious that it sees or walks.*

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* Instead of «local motion,» the French has «existence in any place.»

X. That the notions which are simplest and self-evident, are obscured by logical definitions; and that such are not to be reckoned among the cognitions acquired by study, [but as born with us].

I do not here explain several other terms which I have used, or design to use in the sequel, because their meaning seems to me sufficiently self-evident. And I frequently remarked that philosophers erred in attempting to explain, by logical definitions, such truths as are most simple and self-evident; for they thus only render them more obscure. And when I said that the proposition, I THINK, THEREFORE I AM, is of all others the first and most certain which occurs to one philosophizing orderly, I did not therefore deny that it was necessary to know what thought, existence, and certitude are, and the truth that, in order to think it is necessary to be, and the like; but, because these are the most simple notions, and such as of themselves afford the knowledge of nothing existing, I did not judge it proper there to enumerate them.

XI. How we can know our mind more clearly than our body.

But now that it may be discerned how the knowledge we have of the mind not only precedes, and has greater certainty, but is even clearer, than that we have of the body, it must be remarked, as a matter that is highly manifest by the natural light, that to nothing no affections or qualities belong; and, accordingly, that where we observe certain affections, there a thing or substance to which these pertain, is necessarily found. The same light also shows us that we know a thing or substance more clearly in proportion as we discover in it a greater number of qualities. Now, it is manifiest that we remark a greater number of qualities in our mind than in any other thing; for there is no occasion on which we know anything whatever when we are not at the same time led with much greater certainty to the knowledge of our own mind. For example, if I judge that there is an earth because I touch or see it, on the same ground, and with still greater reason, I must be persuaded that my mind exists; for it may be, perhaps, that I think I touch the earth while there is none in existence; but it is not possible that I should so judge, and my mind which thus judges not exist; and the same holds good of whatever object is presented to our mind.

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* In the French, «which alone has the power of perceiving, or of being conscious in any other way whatever.»

XII. How it happens that everyone does not come equally to know this.

Those who have not philosophized in order have had other opinions on this subject, because they never distinguished with sufficient care the mind from the body. For, although they had no difficulty in believing that they themselves existed, and that they had a higher assurance of this than of any other thing, nevertheless, as they did not observe that by THEMSELVES, they ought here to understand their MINDS alone [when the question related to metaphysical certainty]; and since, on the contrary, they rather meant their bodies which they saw with their eyes, touched with their hands, and to which they erroneously attributed the faculty of perception, they were prevented from distinctly apprehending the nature of the mind.

XIII. In what sense the knowledge of other things depends upon the knowledge of God.

But when the mind, which thus knows itself but is still in doubt as to all other things, looks around on all sides, with a view to the further extension of its knowledge, it first of all discovers within itself the ideas of many things; and while it simply contemplates them, and neither affirms nor denies that there is anything beyond itself corresponding to them, it is in no danger of erring. The mind also discovers certain common notions out of which it frames various demonstrations that carry conviction to such a degree as to render doubt of their truth impossible, so long as we give attention to them. For example, the mind has within itself ideas of numbers and figures, and it has likewise among its common notions the principle THAT IF EQUALS BE ADDED TO EQUALS THE WHOLES WILL BE EQUAL, and the like; from which it is easy to demonstrate that the three angles of a triangle are equal to two right angles, etc. Now, so long as we attend to the premises from which this conclusion and others similar to it were deduced, we feel assured of their truth; but, as the mind cannot always think of these with attention, when it has the remembrance of a conclusion without recollecting the order of its deduction, and is uncertain whether the author of its being has created it of a nature that is liable to be deceived, even in what appears most evident, it perceives that there is just ground to distrust the truth of such conclusions, and that it cannot possess any certain knowledge until it has discovered its author.

XIV. That we may validly infer the existence of God from necessary existence being comprised in the concept we have of him.

When the mind afterward reviews the different ideas that are in it, it discovers what is by far the chief among them — that of a Being omniscient, all-powerful, and absolutely perfect; and it observes that in this idea there is contained not only possible and contingent existence, as in the ideas of all other things which it clearly perceives, but existence absolutely necessary and eternal. And just as because, for example, the equality of its three angles to two right angles is necessarily comprised in the idea of a triangle, the mind is firmly persuaded that the three angles of a triangle are equal to two right angles; so, from its perceiving necessary and eternal existence to be comprised in the idea which it has of an all-perfect Being, it ought manifestly to conclude that this all-perfect Being exists.

XV. That necessary existence is not in the same way comprised in the notions which we have of other things, but merely contingent existence.

The mind will be still more certain of the truth of this conclusion, if it consider that it has no idea of any other thing in which it can discover that necessary existence is contained; for, from this circumstance alone, it will discern that the idea of an all-perfect Being has not been framed by itself, and that it does not represent a chimera, but a true and immutable nature, which must exist since it can only be conceived as necessarily existing.

XVI. That prejudices hinder many from clearly knowing the necessity of the existence of God.

Our mind would have no difficulty in assenting to this truth, if it were, first of all, wholly free from prejudices;

but as we have been accustomed to distinguish, in all other things, essence from existence, and to imagine at will many ideas of things which neither are nor have been, it easily happens, when we do not steadily fix our thoughts on the contemplation of the all-perfect Being, that a doubt arises as to whether the idea we have of him is not one of those which we frame at pleasure, or at least of that class to whose essence existence does not pertain.

XVII. That the greater objective (representative) perfection there is in our idea of a thing, the greater also must be the perfection of its cause.

When we further reflect on the various ideas that are in us, it is easy to perceive that there is not much difference among them, when we consider them simply as certain modes of thinking, but that they are widely different, considered in reference to the objects they represent; and that their causes must be so much the more perfect according to the degree of objective perfection contained in them.* For there is no difference between this and the case of a person who has the idea of a machine, in the construction of which great skill is displayed, in which circumstances we have a right to inquire how he came by this idea, whether, for example, he somewhere saw such a machine constructed by another, or whether he was so accurately taught the mechanical sciences, or is endowed with such force of genius, that he was able of himself to invent it, without having elsewhere seen anything like it; for all the ingenuity which is contained in the idea objectively only, or as it were in a picture, must exist at least in its first and chief cause, whatever that may be, not only objectively or representatively, but in truth formally or eminently.

XVIII. That the existence of God may be again inferred from the above.

Thus, because we discover in our minds the idea of God, or of an all-perfect Being, we have a right to inquire into the source whence we derive it; and we will discover that the perfections it represents are so immense as to render it quite certain that we could only derive it from an all-perfect Being; that is, from a God really existing. For it is not only manifest by the natural light that nothing cannot be the cause of anything whatever, and that the more perfect cannot arise from the less perfect, so as to be thereby produced as by its efficient and total cause, but also that it is impossible we can have the idea or representation of anything whatever, unless there be somewhere, either in us or out of us, an original which comprises, in reality, all the perfections that are thus represented to us; but, as we do not in any way find in ourselves those absolute perfections of which we have the idea, we must conclude that they exist in some nature different from ours, that is, in God, or at least that they were once in him; and it most manifestly follows [from their infinity] that they are still there.

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* «As what they represent of their object has more perfection.»—*French.*

XIX. That, although we may not comprehend the nature of God, there is yet nothing which we know so clearly as his perfections.

This will appear sufficiently certain and manifest to those who have been accustomed to contemplate the idea of God, and to turn their thoughts to his infinite perfections; for, although we may not comprehend them, because it is of the nature of the infinite not to be comprehended by what is finite, we nevertheless conceive them more clearly and distinctly than material objects, for this reason, that,* being simple, and unobscured by limits,* they occupy our mind more fully.

XX. That we are not the cause of ourselves, but that this is God, and consequently that there is a God.

But, because every one has not observed this, and because when we have an idea of any machine in which great skill is displayed, we usually know with sufficient accuracy the manner in which we obtained it, and as we cannot even recollect when the idea we have of a God was communicated to us by him, seeing it was always in our minds, it is still necessary that we should continue our review, and make inquiry after our author, possessing, as we do, the idea of the infinite perfections of a God: for it is in the highest degree evident by the natural light, that that which knows something more perfect than itself, is not the source of its own being, since it would thus have given to itself all the perfections which it knows; and that, consequently, it could draw its origin from no other being than from him who possesses in himself all these perfections, that is, from God.

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* After LIMITS, «what of them we do conceive is much less confused. There is, besides, no speculation more calculated to aid in perfecting our understanding, which is more important than this, inasmuch as the consideration of an object that has no limits to its perfections fills us with satisfaction and assurance.»—*French.*

XXI. That the duration alone of our life is sufficient to demonstrate the existence of God.

The truth of this demonstration will clearly appear, provided we consider the nature of time, or the duration of things; for this is of such a kind that its parts are not mutually dependent, and never co-existent; and, accordingly, from the fact that we now are, it does not necessarily follow that we shall be a moment afterward, unless some cause, viz, that which first produced us, shall, as it were, continually reproduce us, that is, conserve us. For we easily understand that there is no power in us by which we can conserve ourselves, and that the being who has so much power as to conserve us out of himself, must also by so much the greater reason conserve himself, or rather stand in need of being conserved by no one whatever, and, in fine, be God.

XXII. That in knowing the existence of God, in the manner here explained, we likewise know all his attributes, as far as they can be known by the natural light alone.

There is the great advantage in proving the existence of God in this way, viz, by his idea, that we at the same time know what he is, as far as the weakness of our nature allows; for, reflecting on the idea we have of him which is born with us, we perceive that he is eternal, omniscient, omnipotent, the source of all goodness and truth, creator of all things, and that, in fine, he has in himself all that in which we can clearly discover any infinite perfection or good that is not limited by any imperfection.

XXIII. That God is not corporeal, and does not perceive by means of senses as we do, or will the evil of sin.

For there are indeed many things in the world that are to a certain extent imperfect or limited, though possessing also some perfection; and it is accordingly impossible that any such can be in God. Thus, looking to corporeal nature,* since divisibility is included in local extension, and this indicates imperfection, it is certain that God is not body. And although in men it is to some degree a perfection to be capable of perceiving by means of the senses, nevertheless since in every sense there is passivity † which indicates dependency, we must conclude that God is in no manner possessed of senses, and that he only understands and wills, not, however, like us, by acts in any way distinct, but always by an act that is one, identical, and the simplest possible, understands, wills, and operates all, that is, all things that in reality exist; for he does not will the evil of sin, seeing this is but the negation of being.

XXIV. That in passing from the knowledge of God to the knowledge of the creatures, it is necessary to remember that our understanding is finite, and the power of God infinite.

But as we know that God alone is the true cause of all that is or can be, we will doubtless follow the best way of philosophizing, if, from the knowledge we have of God himself, we pass to the explication of the things which he has created, and essay to deduce it from the notions that are naturally in our minds, for we will thus obtain the most perfect science, that is, the knowledge of effects through their causes. But that we may be able to make this attempt with sufficient security from error, we must use the precaution to bear in mind as much as possible that God, who is the author of things, is infinite, while we are wholly finite.

XXV. That we must believe all that God has revealed, although it may surpass the reach of our faculties.

Thus, if perhaps God reveal to us or others, matters concerning himself which surpass the natural powers of our mind, such as the mysteries of the incarnation and of the trinity, we will not refuse to believe them, although we may not clearly understand them; nor will we be in any way surprised to find in the immensity of his nature, or even in what he has created, many things that exceed our comprehension.

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* In the French, «since extension constitutes the nature of body,»

† In the French, «because our perceptions arise from impressions made upon us from another source,» *i. e.*, than ourselves.

XXVI. That it is not needful to enter into disputes* regarding the infinite, but merely to hold all that in which we can find no limits as indefinite, such as the extension of the world, the divisibility of the parts of matter, the number of the stars, etc.

We will thus never embarrass ourselves by disputes about the infinite, seeing it would be absurd for us who are finite to undertake to determine anything regarding it, and thus as it were to limit it by endeavoring to comprehend it. We will accordingly give ourselves no concern to reply to those who demand whether the half of an infinite line is also infinite, and whether an infinite number is even or odd, and the like, because it is only such as imagine their minds to be infinite who seem bound to entertain questions of this sort. And, for our part, looking to all those things in which in certain senses, we discover no limits, we will not, therefore, affirm that they are infinite, but will regard them simply as indefinite. Thus, because we cannot imagine extension so great that we cannot still conceive greater, we will say that the magnitude of possible things is indefinite, and because a body cannot be divided into parts so small that each of these may not be conceived as again divided into others still smaller, let us regard quantity as divisible into parts whose number is indefinite; and as we cannot imagine so many stars that it would seem impossible for God to create more, let us suppose that their number is indefinite, and so in other instances.

XXVII. What difference there is between the indefinite and the infinite.

And we will call those things indefinite rather than infinite, with the view of reserving to God alone the appellation of infinite; in the first place, because not only do we discover in him alone no limits on any side, but also because we positively conceive that he admits of none; and in the second place, because we do not in the same way positively conceive that other things are in every part unlimited, but merely negatively admit that their limits, if they have any, cannot be discovered by us.

XXVIII. That we must examine, not the final, but the efficent, causes of created things.

Likewise, finally, we will not seek reasons of natural things from the end which God or nature proposed to himself in their creation (*i. e.*, final causes),* for we ought not to presume so far as to think that we are sharers in the counsels of Deity, but, considering him as the efficient cause of all things, let us endeavor to discover by the natural light† which he has planted in us, applied to those of his attributes of which he has been willing we should have some knowledge, what must be concluded regarding those effects we perceive by our senses; bearing in mind, however, what has been already said, that we must only confide in this natural light so long as nothing contrary to its dictates is revealed by God himself.‡

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* « To essay to comprehend the infinite. »—*French.*

XXIX. That God is not the cause of our errors.

The first attribute of God which here falls to be considered, is that he is absolutely veracious and the source of all light, so that it is plainly repugnant for him to deceive us, or to be properly and positively the cause of the errors to which we are consciously subject; for although the address to deceive seems to be some mark of subtlety of mind among men, yet without doubt the will to deceive only proceeds from malice or from fear and weakness, and consequently cannot be attributed to God.

XXX. That consequently all which we clearly perceive is true, and that we are thus delivered from the doubts above proposed.

Whence it follows, that the light of nature, or faculty of knowledge given us by God, can never compass any object which is not true, in as far as it attains to a knowledge of it, that is, in as far as the object is clearly and distinctly apprehended. For God would have merited the appellation of a deceiver if he had given us this faculty perverted, and such as might lead us to take falsity for truth [when we used it aright]. Thus the highest doubt is removed, which arose from our ignorance on the point as to whether perhaps our nature was such that we might be deceived even in those things that appear to us the most evident. The same principle ought also to be of avail against all the other grounds of doubting that have been already enumerated. For mathematical truths ought now to be above suspicion, since these are of the clearest. And if we perceive anything by our senses, whether while awake or asleep, we will easily discover the truth, provided we separate what there is of clear and distinct in the knowledge from what is obscure and confused. There is no need that I should here say more on this subject, since it has already received ample treatment in the metaphysical Meditations; and what follows will serve to explain it still more accurately.

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* «We will not stop to consider the ends which God proposed to himself in the creation of the world, and we will entirely reject from our philosophy the search of final causes.» — *French*.

† «Faculty of reasoning.» — *French*.

‡ The last clause, beginning «bearing in mind,» is omitted in the French.

XXXI. That our errors are, in respect of God, merely negations, but, in respect of ourselves, privations.

But as it happens that we frequently fall into error, although God is no deceiver, if we desire to inquire into the origin and cause of our errors, with a view to guard against them, it is necessary to observe that they depend less on our understanding than on our will, and that they have no need of the actual concourse of God, in order to their production; so that, when considered in reference to God, they are merely negations, but in reference to ourselves, privations.

XXXII. That there are only two modes of thinking in us, viz, the perception of the understanding and the action of the will.

For all the modes of thinking of which we are conscious may be referred to two general classes, the one of which is the perception or operation of the understanding, and the other the volition or operation of the will. Thus, to perceive by the senses (*sentire*), to imagine and to conceive things purely intelligible, are only different modes of perceiving (*percipiendi*); but to desire, to be averse from, to affirm, to deny, to doubt, are different modes of willing.

XXXIII. That we never err unless when we judge of something which we do not sufficiently apprehend.

When we apprehend anything we are in no danger of error, if we refrain from judging of it in any way; and even when we have formed a judgment regarding it, we would never fall into error, provided we gave our assent only to what we clearly and distinctly perceived; but the reason why we are usually deceived, is that we judge without possessing an exact knowledge of that of which we judge.

XXXIV. That the will as well as the understanding is required for judging.

I admit that the understanding is necessary for judging, there being no room to suppose that we can judge of that which we in no way apprehend; but the will also is required in order to our assenting to what we have in any degree perceived. It is not necessary, however, at least to form any judgment whatever, that we have an entire and perfect apprehension of a thing; for we may assent to many things of which we have only a very obscure and confused knowledge.

XXXV. That the will is of greater extension than the understanding, and is thus the source of our errors.

Further, the perception of the intellect extends only to the few things that are presented to it, and is always very limited: the will, on the other hand, may, in a certain sense, be said to be infinite, because we observe nothing that can be the object of the will of any other, even of the unlimited will of God, to which ours cannot also extend, so that we easily carry it beyond the objects we clearly perceive; and when we do this, it is not wonderful that we happen to be deceived.

XXXVI. That our errors cannot be imputed to God.

But although God has not given us an omniscient understanding, he is not on this account to be considered in any wise the author of our errors, for it is of the nature of created intellect to be finite, and of finite intellect not to embrace all things.

XXXVII. That the chief perfection of man is his being able to act freely or by will, and that it is this which renders him worthy of praise or blame.

That the will should be the more extensive is in harmony with its nature; and it is a high perfection in man to be able to act by means of it, that is, freely; and thus in a peculiar way to be the master of his own actions, and merit praise or blame. For self-acting machines are not commended because they perform with exactness all the movements for which they were adapted, seeing their motions are carried on necessarily; but the maker of them is praised on account of the exactness with which they were framed, because he did not act of necessity, but freely; and, on the same principle, we must attribute to ourselves something more on this account, that when we embrace truth, we do so not of necessity, but freely.

XXXVIII. That error is a defect in our mode of acting, not in our nature; and that the faults of their subjects may be frequently attributed to other masters, but never to God.

It is true, that as often as we err, there is some defect in our mode of action or in the use of our liberty, but not in our nature, because this is always the same, whether our judgments be true or false. And although God could have given to us such perspicacity of intellect that we should never have erred, we have, notwithstanding, no right to demand this of him; for, although with us he who was able to prevent evil and did not is held guilty of it, God is not in the same way to be reckoned responsible for our errors because he had the power to prevent them, inasmuch as the dominion which some men possess over others has been instituted for the purpose of enabling them to hinder those under them from doing evil, whereas the dominion which God exercises over the universe is perfectly absolute and free. For this reason we ought to thank him for the goods he has given us, and not complain that he has not blessed us with all which we know it was in his power to impart.

XXXIX. That the liberty of our will is self-evident.

Finally, it is so manifest that we possess a free will, capable of giving or withholding its assent, that this truth must be reckoned among the first and most common notions which are born with us. This, indeed, has already very clearly appeared, for when essaying to doubt of all things, we went so far as to suppose that even he who created us employed his limitless power in deceiving us in every way, we were conscious nevertheless of being free to abstain from believing what was not in every respect certain and undoubted. But that of which we are unable to doubt at such a time is as self-evident and clear as any thing we can ever know.

XL. That it is likewise certain that God has foreordained all things.

But because what we have already discovered of God, gives us the assurance that his power is so immense that we would sin in thinking ourselves capable of ever doing anything which he had not ordained beforehand, we should soon be embarrassed in great difficulties if we undertook to harmonize the pre-ordination of God with the freedom of our will, and endeavored to comprehend both truths at once.

XLI. How the freedom of our will may be reconciled with the Divine pre-ordination.

But, in place of this, we will be free from these embarrassments if we recollect that our mind is limited, while the power of God, by which he not only knew from all eternity what is or can be, but also willed and pre-ordained it, is infinite. It thus happens that we possess sufficient intelligence to know clearly and distinctly that this power is in God, but not enough to comprehend how he leaves the free actions of men indeterminate; and, on the other hand, we have such consciousness of the liberty and indifference which exists in ourselves, that there is nothing we more clearly or perfectly comprehend: [so that the omnipotence of God ought not to keep us from believing it]. For it would be absurd to doubt of that of which we are fully conscious, and which we experience as existing in ourselves, because we do not comprehend another matter which, from its very nature, we know to be incomprehensible.

XLII. How, although we never will to err, it is nevertheless by our will that we do err.

But now since we know that all our errors depend upon our will, and as no one wishes to deceive himself, it may seem wonderful that there is any error in our judgments at all. It is necessary to remark, however, that there is a great difference between willing to be deceived, and willing to yield assent to opinions in which it happens that error is found. For though there is no one who expressly wishes to fall into error, we will yet hardly find anyone who is not ready to assent to things in which, unknown to himself, error lurks; and it even frequently happens that it is the desire itself of following after truth that leads those not fully aware of the order in which it ought to be sought for, to pass judgment on matters of which they have no adequate knowledge, and thus to fall into error.

XLIII. That we shall never err if we give our assent only to what we clearly and distinctly perceive.

But it is certain we will never admit falsity for truth, so long as we judge only of that which we clearly and distinctly perceive; because, as God is no deceiver, the faculty of knowledge which he has given us cannot be fallacious, nor, for the same reason, the faculty of will, when we do not extend it beyond the objects we clearly know. And even although this truth could not be established by reasoning, the minds of all have been so impressed by nature as spontaneously to assent to whatever is clearly perceived, and to experience an impossibility to doubt of its truth.

XLIV. That we uniformly judge improperly when we assent to what we do not clearly perceive, although our judgment may chance to be true; and that it is frequently our memory which deceives us by leading us to believe that certain things were formerly sufficiently understood by us.

It is likewise certain that, when we approve of any reason which we do not apprehend, we are either deceived, or, if we stumble on the truth, it is only by chance, and thus we can never possess the assurance that we are not in error. I confess it seldom happens that we judge of a thing when we have observed we do not apprehend it, because it is a dictate of the natural light never to judge of what we do not know. But we most frequently err in this, that we presume upon a past knowledge of much to which we give our assent, as to something treasured up in the memory, and perfectly known to us; whereas, in truth, we have no such knowledge.

XLV. What constitutes clear and distinct perception.

There are indeed a great many persons who, through their whole lifetime, never perceive anything in a way necessary for judging of it properly; for the knowledge upon which we can establish a certain and indubitable judgment must be not only clear, but also distinct. I call that clear which is present and manifest to the mind giving attention to it, just as we are said clearly to see objects when, being present to the eye looking on, they stimulate it with sufficient force, and it is disposed to regard them; but the distinct is that which is so precise and different from all other objects as to comprehend in itself only what is clear.*

XLVI. It is shown, from the example of pain, that a perception may be clear without being distinct, but that it cannot be distinct unless it is clear.

For example, when any one feels intense pain, the knowledge which he has of this pain is very clear, but it is not always distinct; for men usually confound it with the obscure judgment they form regarding its nature, and think that there is in the suffering part something similar to the sensation of pain of which they are alone conscious. And thus perception may be clear without being distinct, but it can never be distinct without likewise being clear.

XLVII. That, to correct the prejudices of our early years, we must consider what is clear in each of our simple † notions.

And, indeed, in our early years, the mind was so immersed in the body, that, although it perceived many things with sufficient clearness, it yet knew nothing distinctly; and since even at that time we exercised our judgment in many matters, numerous prejudices were thus contracted, which, by the majority, are never afterward laid aside. But that we may now be in a position to get rid of these, I will here briefly enumerate all the simple notions of which our thoughts are composed, and distinguish in each what is clear from what is obscure, or fitted to lead into error.

XLVIII. That all the objects of our knowledge are to be regarded either (1) as things or the affections of things; or (2) as eternal truths; with the enumeration of things.

Whatever objects fall under our knowledge we consider either as things or the affections of things,‡ or as eternal truths possessing no existence beyond our thought. Of the first class the most general are substance, duration, order, number, and perhaps also some others, which notions apply to all the kinds of things. I do not, however, recognize more than two highest kinds (*summa genera*) of things; the first of intellectual things, or such as have the power of thinking, including mind or thinking substance and its properties; the second, of material things, embracing extended substance, or body and its properties. Perception, volition, and all modes as well of knowing as of willing, are related to thinking substance; on the other hand, to extended substance we refer magnitude, or extension in length, breadth, and depth, figure, motion, situation, divisibility of parts themselves, and the like. There are, however, besides these, certain things of which we have an internal experience that ought not to be referred either to the mind of itself, or to the body alone, but to the close and intimate union between them, as will hereafter be shown in its place. Of this class are the appetites of hunger and thirst, etc., and also the emotions or passions of the mind which are not exclusively mental affections, as the emotions of anger, joy, sadness, love, etc.; and finally, all the sensations, as of pain, titillation, light, and colors, sounds, smells, tastes, heat, hardness, and the other tactile qualities.

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* « What appears manifestly to him who considers it as he ought.» —*French.*

† « First.»— *French.*

‡ Things and the affections of things are (in the French) equivalent to «what has some (*i. e.*, a REAL) existence,» as opposed to the class of «eternal truths,» which have merely an IDEAL existence.

XLIX. That the eternal truths cannot be thus enumerated, but that this is not necessary.

What I have already enumerated we are to regard as things, or the qualities or modes of things. We now come to speak of eternal truths. When we apprehend that it is impossible a thing can arise from nothing, this proposition *ex nihilo nihil fit*, is not considered as something existing, or as the mode of a thing, but as an eternal truth having its seat in our mind, and is called a common notion or axiom. Of this class are the following: It is impossible the same thing can at once be and not be; what is done cannot be undone; he who thinks must exist while he thinks; and innumerable others, the whole of which it is indeed difficult to enumerate, but this is not necessary, since, if blinded by no prejudices, we cannot fail to know them when the occasion of thinking them occurs.

L. That these truths are clearly perceived, but not equally by all men, on account of prejudices.

And, indeed, with regard to these common notions, it is not to be doubted that they can be clearly and distinctly known, for otherwise they would not merit this appellation: as, in truth, some of them are not, with respect to all men, equally deserving of the name, because they are not equally admitted by all: not, however, from this reason, as I think, that the faculty of knowledge of one man extends farther than that of another, but rather because these common notions are opposed to the prejudices of some, who, on this account, are not able readily to embrace them, even although others, who are free from those prejudices, apprehend them with the greatest clearness.

LI. What substance is, and that the term is not applicable to God and the creatures in the same sense.

But with regard to what we consider as things or the modes of things, it is worth while to examine each of them by itself. By substance we can conceive nothing else than a thing which exists in such a way as to stand in need of nothing beyond itself in order to its existence. And in truth, there can be conceived but one substance which is absolutely independent, and that is God. We perceive that all other things can exist only by help of the concourse of God. And, accordingly, the term substance does not apply to God and the creatures UNIVOCALLY, to adopt a term familiar in the schools; that is, no signification of this word can be distinctly understood which is common to God and them.

LII. That the term is applicable univocally to the mind and the body, and how substance itself is known.

Created substances, however, whether corporeal or thinking, may be conceived under this common concept; for these are things which, in order to their existence, stand in need of nothing but the concourse of God. But yet substance cannot be first discovered merely from its being a thing which exists independently, for existence by itself is not observed by us. We easily, however, discover substance itself from any attribute of it, by this common notion, that of nothing there are no attributes, properties, or qualities; for, from perceiving that some attribute is present, we infer that some existing thing or substance to which it may be attributed is also of necessity present.

LIII. That of every substance there is one principal attribute, as thinking of the mind, extension of the body.

But, although any attribute is sufficient to lead us to the knowledge of substance, there is, however, one principal property of every substance, which constitutes its nature or essence, and upon which all the others depend. Thus, extension in length, breadth, and depth, constitutes the nature of corporeal substance; and thought the nature of thinking substance. For every other thing that can be attributed to body, presupposes extension, and is only some mode of an extended thing; as all the properties we discover in the mind are only diverse modes of thinking. Thus, for example, we cannot conceive figure unless in something extended, nor motion unless in extended space, nor imagination, sensation, or will, unless in a thinking thing. But, on the other hand, we can conceive extension without figure or motion, and thought without imagination or sensation, and so of the others; as is clear to any one who attends to these matters.

LIV. How we may have clear and distinct notions of the substance which thinks, of that which is corporeal, and of God.

And thus we may easily have two clear and distinct notions or ideas, the one of created substance, which thinks, the other of corporeal substance, provided we carefully distinguish all the attributes of thought from those of extension. We may also have a clear and distinct idea of an uncreated and independent thinking substance, that is of God, provided we do not suppose that this idea adequately represents to us all that is in God, and do not mix up with it anything fictitious, but attend simply to the characters that are comprised in the notion we have of him, and which we clearly know to belong to the nature of an absolutely perfect Being. For no one can deny that there is in us such an idea of God, without groundlessly supposing that there is no knowledge of God at all in the human mind.

LV. How duration, order, and number may be also distinctly conceived.

We will also have most distinct conceptions of duration, order, and number, if, in place of mixing up with our notions of them that which properly belongs to the concept of substance, we merely think that the duration of a thing is a mode under which we conceive this thing, in so far as it continues to exist; and, in like manner, that order and number are not in reality different from things disposed in order and numbered, but only modes under which we diversely consider these things.

LVI. What are modes, qualities, attributes.

And, indeed, we here understand by modes the same with what we elsewhere designate attributes or qualities. But when we consider substance as affected or varied by them, we use the term modes; when from this variation it may be denominated of such a kind, we adopt the term qualities [to designate the different modes which cause it to be so named]; and finally, when we simply regard these modes as in the substance, we call them attributes. Accordingly, since God must be conceived as superior to change, it is not proper to say that there are modes or qualities in him, but simply attributes; and even in created things that which is found in them always in the same mode, as existence and duration in the thing which exists and endures, ought to be called attribute, and not mode or quality.

LVII. That some attributes exist in the things to which they are attributed, and others only in our thought; and what duration and time are.

Of these attributes or modes there are some which exist in the things themselves, and others that have only an existence in our thought; thus, for example, time, which we distinguish from duration taken in its generality, and call the measure of motion, is only a certain mode under which we think duration itself, for we do not indeed conceive the duration of things that are moved to be different from the duration of things that are not moved: as is evident from this, that if two bodies are in motion for an hour, the one moving quickly and the other slowly, we do not reckon more time in the one than in the other, although there may be much more motion in the one of the bodies than in the other. But that we may comprehend the duration of all things under a common measure, we compare their duration with that of the greatest and most regular motions that give rise to years and days, and which we call time; hence what is so designated is nothing superadded to duration, taken in its generality, but a mode of thinking.

LVIII. That number and all universals are only modes of thought.

In the same way number, when it is not considered as in created things, but merely in the abstract or in general, is only a mode of thinking, and the same is true of all those general ideas we call universals.

LIX. How universals are formed; and what are the five common, viz, genus, species, difference, property, and accident.

Universals arise merely from our making use of one and the same idea in thinking of all individual objects between which there subsists a certain likeness; and when we comprehend all the objects represented by this idea under one name, this term likewise becomes universal. For example, when we see two stones, and do not regard their nature further than to remark that there are two of them, we form the idea of a certain number, which we call the binary; and when we afterward see two birds or two trees, and merely take notice of them so far as to observe that there are two of them, we again take up the same idea as before, which is, accordingly, universal; and we likewise give to this number the same universal appellation of binary. In the same way, when we consider a figure of three sides, we form a certain idea, which we call the idea of a triangle, and we afterward make use of it as the universal to represent to our mind all other figures of three sides. But when we remark more particularly that of figures of three sides, some have a right angle and others not, we form the universal idea of a right-angled triangle, which being related to the preceding as more general, may be called species; and the right angle the universal difference by which right-angled triangles are distinguished from all others; and further, because the square of the side which sustains the right angle is equal to the squares of the other two sides, and because this property belongs only to this species of triangles, we may call it the universal property of the species. Finally, if we suppose that of these triangles some are moved and others not, this will be their universal accident; and, accordingly, we commonly reckon five universals, viz, genus, species, difference, property, accident.

LX. Of distinctions; and first of the real.

But number in things themselves arises from the distinction there is between them: and distinction is threefold, viz, real, modal, and of reason. The real properly subsists between two or more substances; and it is sufficient to assure us that two substances are really mutually distinct, if only we are able clearly and distinctly to conceive the one of them without the other. For the knowledge we have of God renders it certain that he can effect all that of which we have a distinct idea; wherefore, since we have now, for example, the idea of an extended and corporeal substance, though we as yet do not know with certainty whether any such thing is really existent, nevertheless, merely because we have the idea of it, we may be assured that such may exist; and, if it really exists, that every part which we can determine by thought must be really distinct from the other parts of the same substance. In the same way, since everyone is conscious that he thinks, and that he in thought can exclude from himself every other substance, whether thinking or extended, it is certain that each of us thus considered is really distinct from every other thinking and corporeal substance. And although we suppose that God united a body to a soul so closely that it was impossible to form a more intimate union, and thus made a composite whole, the two substances would remain really distinct, notwithstanding this union: for with whatever tie God connected them, he was not able to rid himself of the power he possessed of separating them, or of conserving the one apart from the other, and the things which God can separate or conserve separately are really distinct.

LXI. Of the modal distinction.

There are two kinds of modal distinctions, viz, that between the mode properly so-called and the substance of which it is a mode, and that between two modes of the same substance. Of the former we have an example in this, that we can clearly apprehend substance apart from the mode which we say differs from it; while, on the other hand, we cannot conceive this mode without conceiving the substance itself. There is, for example, a modal distinction between figure or motion and corporeal substance in which both exist; there is a similar distinction between affirmation or recollection and the mind. Of the latter kind we have an illustration in our ability to recognize the one of two modes apart from the other, as figure apart from motion, and motion apart from figure; though we cannot think of either the one or the other without thinking of the common substance in which they adhere. If, for example, a stone is moved, and is withal square, we can, indeed, conceive its square figure without its motion, and reciprocally its motion without its square figure; but we can conceive neither this motion nor this figure apart from the substance of the stone. As for the distinction according to which the mode of one substance is different from another substance, or from the mode of another substance as the motion of one body is different from another body or from the mind, or as motion is different from doubt, it seems to me that it should be called real rather than modal, because these modes cannot be clearly conceived apart from the really distinct substances of which they are the modes.

LXII. Of the distinction of reason (logical distinction).

Finally, the distinction of reason is that between a substance and some one of its attributes, without which it is impossible, however, we can have a distinct conception of the substance itself; or between two such attributes of a common substance, the one of which we essay to think without the other. This distinction is manifest from our inability to form a clear and distinct idea of such substance, if we separate from it such attribute; or to have a clear perception of the one of two such attributes if we separate it from the other. For example, because any substance which ceases to endure ceases also to exist, duration is not distinct from substance except in thought (*ratione*); and in general all the modes of thinking which we consider as in objects differ only in thought, as well from the objects of which they are thought as from each other in a common object.* It occurs, indeed, to me that I have elsewhere classed this kind of distinction with the modal (viz, toward the end of the Reply to the First Objections to the Meditations on the First Philosophy); but there it was only necessary to treat of these distinctions generally, and it was sufficient for my purpose at that time simply to distinguish both of them from the real.

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* « And generally all the attributes that lead us to entertain different thoughts of the same thing, such as, for example, the extension of body and its property of divisibility, do not differ from the body which is to us the object of them, or from each other, unless as we sometimes confusedly think the one without thinking the other.»—*French.*

LXIII. How thought and extension may be distinctly known, as constituting, the one the nature of mind, the other that of body.

Thought and extension may be regarded as constituting the natures of intelligent and corporeal substance; and then they must not be otherwise conceived than as the thinking and extended substances themselves, that is, as mind and body, which in this way are conceived with the greatest clearness and distinctness. Moreover, we more easily conceive extended or thinking substance than substance by itself, or with the omission of its thinking or extension. For there is some difficulty in abstracting the notion of substance from the notions of thinking and extension, which, in truth, are only diverse in thought itself (*i. e.*, logically different); and a concept is not more distinct because it comprehends fewer properties, but because we accurately distinguish what is comprehended in it from all other notions.

LXIV. How these may likewise be distinctly conceived as modes of substance.

Thought and extension may be also considered as modes of substance; in as far, namely, as the same mind may have many different thoughts, and the same body, with its size unchanged, may be extended in several diverse ways, at one time more in length and less in breadth or depth, and at another time more in breadth and less in length; and then they are modally distinguished from substance, and can be conceived not less clearly and distinctly, provided they be not regarded as substances or things separated from others, but simply as modes of things. For by regarding them as in the substances of which they are the modes, we distinguish them from these substances, and take them for what in truth they are: whereas, on the other hand, if we wish to consider them apart from the substances in which they are, we should by this itself regard them as self-subsisting things, and thus confound the ideas of mode and substance.

LXV. How we may likewise know their modes.

In the same way we will best apprehend the diverse modes of thought, as intellection, imagination, recollection, volition, etc., and also the diverse modes of extension, or those that belong to extension, as all figures, the situation of parts and their motions, provided we consider them simply as modes of the things in which they are; and motion as far as it is concerned, provided we think merely of locomotion, without seeking to know the force that produces it, and which nevertheless I will essay to explain in its own place.

LXVI. How our sensations, affections, and appetites may be clearly known, although we are frequently wrong in our judgments regarding them.

There remain our sensations, affections, and appetites, of which we may also have a clear knowledge, if we take care to comprehend in the judgments we form of them only that which is precisely contained in our perception of them, and of which we are immediately conscious. There is, however, great difficulty in observing this, at least in respect of sensations; because we have all, without exception, from our youth judged that all the things we perceived by our senses had an existence beyond our thought, and that they were entirely similar to the sensations, that is, perceptions, we had of them. Thus when, for example, we saw a certain color, we thought we saw something occupying a place out of us, and which was entirely similar to that idea of color we were then conscious of; and from the habit of judging in this way, we seemed to see this so clearly and distinctly that we esteemed it (*i. e.*, the externality of the color) certain and indubitable.

LXVII. That we are frequently deceived in our judgments regarding pain itself.

The same prejudice has place in all our other sensations, even in those of titillation and pain. For though we are not in the habit of believing that there exist out of us objects that resemble titillation and pain, we do not, nevertheless, consider these sensations as in the mind alone, or in our perception, but as in the hand, or foot, or some other part of our body. There is no reason, however, to constrain us to believe that the pain, for example, which we feel, as it were in the foot, is something out of the mind existing in the foot, or that the light which we see, as it were, in the sun exists in sun as it is in us. Both these beliefs are prejudices of our early years, as will clearly appear in the sequel.

LXVIII. How in these things what we clearly conceive is to be distinguished from that in which we may be deceived.

But that we may distinguish what is clear in our sensations from what is obscure, we ought most carefully to observe that we possess a clear and distinct knowledge of pain, color, and other things of this sort, when we consider them simply as sensations or thoughts; but that, when they are judged to be certain things subsisting beyond our mind, we are wholly unable to form any conception of them. Indeed, when any one tells us that he sees color in a body or feels pain in one of his limbs, this is exactly the same as if he said that he there saw or felt something of the nature of which he was entirely ignorant, or that he did not know what he saw or felt. For although, when less attentively examining his thoughts, a person may easily persuade himself that he has some knowledge of it, since he supposes that there is something resembling that sensation of color or of pain of which he is conscious; yet, if he reflects on what the sensation of color or pain represents to him as existing in a colored body or in a wounded member, he will find that of such he has absolutely no knowledge.

LXIX. That magnitude, figure, etc., are known far differently from color, pain, etc.

What we have said above will be more manifest, especially if we consider that size in the body perceived, figure, motion (at least local, for philosophers by fancying other kinds of motion have rendered its nature less intelligible to themselves), the situation of parts, duration, number, and those other properties which, as we have already said, we clearly perceive in all bodies, are known by us in a way altogether different from that in which we know what color is in the same body, or pain, smell, taste, or any other of those properties which I have said above must be referred to the senses. For although when we see a body we are not less assured of its existence from its appearing figured than from its appearing colored,* we yet know with far greater clearness its property of figure than its color.

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* "By the color we perceive on occasion of it."—*French.*

LXX. That we may judge of sensible things in two ways, by the one of which we avoid error, by the other fall into it.

It is thus manifest that to say we perceive colors in objects is in reality equivalent to saying we perceive something in objects and are yet ignorant of what it is, except as that which determines in us a certain highly vivid and clear sensation, which we call the sensation of colors. There is, however, very great diversity in the manner of judging: for so long as we simply judge that there is an unknown something in objects (that is, in things such as they are, from which the sensation reached us), so far are we from falling into error that, on the contrary, we thus rather provide against it, for we are less apt to judge rashly of a thing which we observe we do not know. But when we think we perceive colors in objects, although we are in reality ignorant of what we then denominate color, and are unable to conceive any resemblance between the color we suppose to be in objects, and that of which we are conscious in sensation, yet because we do not observe this, or because there are in objects several properties, as size, figure, number, etc., which, as we clearly know, exist, or may exist in them as they are perceived by our senses or conceived by our understanding, we easily glide into the error of holding that what is called color in objects is something entirely resembling the color we perceive, and thereafter of supposing that we have a clear perception of what is in no way perceived by us.

LXXI. That the chief cause of our errors is to be found in the prejudices of our childhood.

And here we may notice the first and chief cause of our errors. In early life the mind was so closely bound to the body that it attended to nothing beyond the thoughts by which it perceived the objects that made impression on the body; nor as yet did it refer these thoughts to anything existing beyond itself, but simply felt pain when the body was hurt, or pleasure when anything beneficial to the body occurred, or if the body was so slightly affected that it was neither greatly benefited nor hurt, the mind experienced the sensations we call tastes, smells, sounds, heat, cold, light, colors, and the like, which in truth are representative of nothing existing out of our mind, and which vary according to the diversities of the parts and modes in which the body is affected.* The mind at the same time also perceived magnitudes, figures, motions, and the like, which were not presented to it as sensations but as things of the modes of things existing, or at least capable of existing out of thought, although it did not yet observe this difference between these two kinds of perceptions. And afterward when the machine of the body, which has been so fabricated by nature that it can of its own inherent power move itself in various ways, by turning itself at random on every side, followed after what was useful and avoided what was detrimental; the mind, which was closely connected with it, reflecting on the objects it pursued or avoided, remarked, for the first time, that they existed out of itself, and not only attributed to them magnitudes, figures, motions, and the like, which it apprehended either as things or as the modes of things, but, in addition, attributed to them tastes, odors and the other ideas of that sort, the sensations of which were caused by itself;† and as it only considered other objects in so far as they were useful to the body, in which it was immersed, it judged that there was greater or less reality in each object, according as the impressions it caused on the body were more or less powerful. Hence arose the belief that there was more substance or body in rocks and metals than in air or water, because the mind perceived in them more hardness and weight. Moreover, the air was thought to be merely nothing so long as we experienced no agitation of it by the wind, or did not feel it hot or cold. And because the stars gave hardly more light than the slender flames of candles, we supposed that each star was but of this size. Again, since the mind did not observe that the earth moved on its axis, or that its superficies was curved like that of a globe, it was on that account more ready to judge the earth immovable and its surface flat. And our mind has been imbued from our infancy with a thousand other prejudices of the same sort, which afterward in our youth we forgot we had accepted without sufficient examination, and admitted as possessed of the highest truth and clearness, as if they had been known by means of our senses, or implanted in us by nature.

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* « Which vary according to the diversities of the movements that pass from all parts of our body to the part of the brain to which it (the mind) is closely joined and united.» — *French.*

† « Which it perceived on occasion of them » (*i. e.*, of external objects).—*French.*

LXXII. That the second cause of our errors is that we cannot forget these prejudices.

And although now in our mature years, when the mind, being no longer wholly subject to the body, is not in the habit of referring all things to it, but also seeks to discover the truth of things considered in themselves, we observe the falsehood of a great many of the judgments we had before formed; yet we experience a difficulty in expunging them from our memory, and, so long as they remain there, they give rise to various errors. Thus, for example, since from our earliest years we imagined the stars to be of very small size, we find it highly difficult to rid ourselves of this imagination, although assured by plain astronomical reasons that they are of the greatest, so prevailing is the power of preconceived opinion.

LXXIII. The third cause is, that we become fatigued by attending to those objects which are not present to the senses; and that we are thus accustomed to judge of these not from present perception but from preconceived opinion.

Besides, our mind cannot attend to any object without at length experiencing some pain and fatigue; and of all objects it has the greatest difficulty in attending to those which are present neither to the senses nor to the imagination: whether for the reason that this is natural to it from its union with the body, or because in our early years, being occupied merely with perceptions and imaginations, it has become more familiar with, and acquired greater facility in thinking in those modes than in any other. Hence it also happens that many are unable to conceive any substance except what is imaginable and corporeal, and even sensible. For they are ignorant of the circumstance, that those objects alone are imaginable which consist in extension, motion, and figure, while there are many others besides these that are intelligible; and they persuade themselves that nothing can subsist but body, and, finally, that there is no body which is not sensible. And since in truth we perceive no object such as it is by sense alone [but only by our reason exercised upon sensible objects], as will hereafter be clearly shown, it thus happens that the majority during life perceive nothing unless in a confused way.

LXXIV. The fourth source of our errors is, that we attach our thoughts to words which do not express them with accuracy.

Finally, since for the use of speech we attach all our conceptions to words by which to express them, and commit to memory our thoughts in connection with these terms, and as we afterward find it more easy to recall the words than the things signified by them, we can scarcely conceive anything with such distinctness as to separate entirely what we conceive from the words that were selected to express it. On this account the majority attend to words rather than to things; and thus very frequently assent to terms without attaching to them any meaning, either because they think they once understood them, or imagine they received them from others by whom they were correctly understood. This, however, is not the place to treat of this matter in detail, seeing the nature of the human body has not yet been expounded, nor the existence even of body established; enough, nevertheless, appears to have been said to enable one to distinguish such of our conceptions as are clear and distinct from those that are obscure and confused.

LXXV. Summary of what must be observed in order to philosophize correctly.

Wherefore if we would philosophize in earnest, and give ourselves to the search after all the truths we are capable of knowing, we must, in the first place, lay aside our prejudices; in other words, we must take care scrupulously to withhold our assent from the opinions we have formerly admitted, until upon new examination we discover that they are true. We must, in the next place, make an orderly review of the notions we have in our minds, and hold as true all and only those which we will clearly and distinctly apprehend. In this way we will observe, first of all, that we exist in so far as it is our nature to think, and at the same time that there is a God upon whom we depend; and after considering his attributes we will be able to investigate the truth of all other things, since God is the cause of them. Besides the notions we have of God and of our mind, we will likewise find that we possess the knowledge of many propositions which are eternally true, as, for example, that nothing cannot be the cause of anything, etc. We will further discover in our minds the knowledge of a corporeal or extended nature that may be moved, divided, etc., and also of certain sensations that affect us, as of pain, colors, tastes, etc., although we do not yet know the cause of our being so affected; and, comparing what we have now learned, by examining those things in their order, with our former confused knowledge of them, we will acquire the habit of forming clear and distinct conceptions of all the objects we are capable of knowing. In these few precepts seem to me to be comprised the most general and important principles of human kowledge.

LXXVI. That we ought to prefer the Divine authority to our perception:* but that, apart from things revealed, we ought to assent to nothing that we do not clearly apprehend.

Above all we must impress on our memory the infallible rule, that what God has revealed is incomparably more certain than anything else; and that we ought to submit our belief to the Divine authority rather than to our own judgment, even although perhaps the light of reason should, with the greatest clearness and evidence, appear to suggest to us something contrary to what is revealed. But in things regarding which there is no revelation, it is by no means consistent with the character of a philosopher to accept as true what he has not ascertained to be such, and to trust more to the senses, in other words, to the inconsiderate judgments of childhood than to the dictates of mature reason.

PART II.

Of the Principles of Material Things.

I. The grounds on which the existence of material things may be known with certainty.

Although we are all sufficiently persuaded of the existence of material things, yet, since this was before called in question by us, and since we reckoned the persuasion of their existence as among the prejudices of our childhood, it is now necessary for us to investigate the grounds on which this truth may be known with certainty. In the first place, then, it cannot be doubted that every perception we have comes to us from some object different from our mind; for it is not in our power to cause ourselves to experience one perception rather than another, the perception being entirely dependent on the object which affects our senses. It may, indeed, be matter of inquiry whether that object be God, or something different from God; but because we perceive, or rather, stimulated by sense, clearly and distinctly apprehend, certain matter extended in length, breadth, and thickness, the various parts of which have different figures and motions, and give rise to the sensations we have of colors, smells, pain, etc., God would, without question, deserve to be regarded as a deceiver, if he directly and of himself presented to our mind the idea of this extended matter, or merely caused it to be presented to us by some object which possessed neither extension, figure, nor motion. For we clearly conceive this matter as entirely distinct from God, and from ourselves, or our mind; and appear even clearly to discern that the idea of it is formed in us on occasion of objects existing out of our minds, to which it is in every respect similar. But since God cannot deceive us, for this is repugnant to his nature, as has been already remarked, we must unhesitatingly conclude that there exists a certain object extended in length, breadth, and thickness, and possessing all those properties which we clearly apprehend to belong to what is extended. And this extended substance is what we call body or matter.

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* « Reasonings. »—*French.*

II. How we likewise know that the human body is closely connected with the mind.

We ought also to conclude that a certain body is more closely united to our mind than any other, because we clearly observe that pain and other sensations affect us without our foreseeing them; and these, the mind is conscious, do not arise from itself alone, nor pertain to it, in so far as it is a thing which thinks, but only in so far as it is united to another thing extended and movable, which is called the human body. But this is not the place to treat in detail of this matter.

III. That the perceptions of the senses do not teach us what is in reality in things, but what is beneficial or hurtful to the composite whole of mind and body.

It will be sufficient to remark that the perceptions of the senses are merely to be referred to this intimate union of the human body and mind, and that they usually make us aware of what, in external objects, may be useful or adverse to this union, but do not present to us these objects as they are in themselves, unless occasionally and by accident. For, after this observation, we will without difficulty lay aside the prejudices of the senses, and will have recourse to our understanding alone on this question, by reflecting carefully on the ideas implanted in it by nature.

IV. That the nature of body consists not in weight, hardness, color, and the like, but in extension alone.

In this way we will discern that the nature of matter or body considered in general, does not consist in its being hard, or ponderous, or colored, or that which affects our senses in any other way, but simply in its being a substance extended in length, breadth, and depth. For, with respect to hardness, we know nothing of it by sense farther than that the parts of hard bodies resist the motion of our hands on coming into contact with them; but if every time our hands moved toward any part, all the bodies in that place receded as quickly as our hands approached, we should never feel hardness; and yet we have no reason to believe that bodies which might thus recede would on this account lose that which makes them bodies. The nature of body does not, therefore, consist in hardness. In the same way, it may be shown that weight, color, and all the other qualities of this sort, which are perceived in corporeal matter, may be taken from it, itself meanwhile remaining entire: it thus follows that the nature of body depends on none of these.

V. That the truth regarding the nature of body is obscured by the opinions respecting rarefaction and a vacuum with which we are preoccupied.

There still remain two causes to prevent its being fully admitted that the true nature of body consists in extension alone. The first is the prevalent opinion, that most bodies admit of being so rarefied and condensed that, when rarefied, they have greater extension than when condensed;

and some even have subtilized to such a degree as to make a distinction between the substance of body and its quantity, and between quantity itself and extension. The second cause is this, that where we conceive only extension in length, breadth, and depth, we are not in the habit of saying that body is there, but only space and further void space, which the generality believe to be a mere negation.

VI. In what way rarefaction takes place.

But with regard to rarefaction and condensation, whoever gives his attention to his own thoughts, and admits nothing of which he is not clearly conscious, will not suppose that there is anything in those processes further than a change of figure in the body rarefied or condensed; so that, in other words, rare bodies are those between the parts of which there are numerous distances filled with other bodies; and dense bodies, on the other hand, those whose parts approaching each other, either diminish these distances, or take them wholly away, in the latter of which cases the body is rendered absolutely dense. The body, however, when condensed, has not, therefore, less extension than when the parts embrace a greater space, owing to their removal from each other, and their dispersion into branches. For we ought not to attribute to it the extension of the pores or distances which its parts do not occupy when it is rarefied, but to the other bodies that fill these interstices; just as when we see a sponge full of water or any other liquid, we do not suppose that each part of the sponge has on this account greater extension than when compressed and dry, but only that its pores are wider, and therefore that the body is diffused over a larger space.

VII. That rarefaction cannot be intelligibly explained unless in the way here proposed.

And indeed I am unable to discover the force of the reasons which have induced some to say that rarefaction is the result of the augmentation of the quantity of body, rather than to explain it on the principle exemplified in the case of a sponge. For although when air or water are rarefied we do not see any of the pores that are rendered large, or the new body that is added to occupy them, it is yet less agreeable to reason to suppose something that is unintelligible for the purpose of giving a verbal and merely apparent explanation of the rarefaction of bodies, than to conclude, because of their rarefaction, that there are pores or distances between the parts which are increased in size, and filled with some new body. Nor ought we to refrain from assenting to this explanation, because we perceive this new body by none of our senses, for there is no reason which obliges us to believe that we should perceive by our senses all the bodies in existence. And we see that it is very easy to explain rarefaction in this manner, but impossible in any other; for, in fine, there would be, as appears to me, a manifest contradiction in supposing that any body was increased by a quantity or extension which it had not before, without the addition to it of a new extended substance, in other words, of another body, because it is impossible to conceive any addition of extension or quantity to a thing without supposing the addition of a substance having quantity or extension, as will more clearly appear from what follows.

VIII. That quantity and number differ only in thought (*ratione*) from that which has quantity and is numbered.

For quantity differs from extended substance, and number from what is numbered, not in reality but merely in our thought; so that, for example, we may consider the whole nature of a corporeal substance which is comprised in a space of ten feet, although we do not attend to this measure of ten feet, for the obvious reason that the thing conceived is of the same nature in any part of that space as in the whole; and, on the other hand, we can conceive the number ten, as also a continuous quantity of ten feet, without thinking of this determinate substance, because the concept of the number ten is manifestly the same whether we consider a number of ten feet or ten of anything else; and we can conceive a continuous quantity of ten feet without thinking of this or that determinate substance, although we cannot conceive it without some extended substance of which it is the quantity. It is in reality, however, impossible that any, even the least part, of such quantity or extension, can be taken away, without the retrenchment at the same time of as much of the substance, nor on the other hand can we lessen the substance without at the same time taking as much from the quantity or extension.

IX. That corporeal substance, when distinguished from its quantity, is confusedly conceived as something incorporeal.

Although perhaps some express themselves otherwise on this matter, I am nevertheless convinced that they do not think differently from what I have now said: for when they distinguish (corporeal) substance from extension or quantity, they either mean nothing by the word (corporeal) substance, or they form in their mind merely a confused idea of incorporeal substance, which they falsely attribute to corporeal, and leave to extension the true idea of this corporeal substance; which extension they call an accident, but with such impropriety as to make it easy to discover that their words are not in harmony with their thoughts.

X. What space or internal place is.

Space or internal place, and the corporeal substance which is comprised in it, are not different in reality, but merely in the mode in which they are wont to be conceived by us. For, in truth, the same extension in length, breadth, and depth, which constitutes space, constitutes body; and the difference between them lies only in this, that in body we consider extension as particular, and conceive it to change with the body; whereas in space we attribute to extension a generic unity, so that after taking from a certain space the body which occupied it, we do not suppose that we have at the same time removed the extension of the space, because it appears to us that the same extension remains there so long as it is of the same magnitude and figure, and preserves the same situation in respect to certain bodies around it, by means of which we determine this space.

XI. How space is not in reality different from corporeal substance.

And indeed it will be easy to discern that it is the same extension which constitutes the nature of body as of space, and that these two things are mutually diverse only as the nature of the genus and species differs from that of the individual, provided we reflect on the idea we have of any body, taking a stone for example, and reject all that is not essential to the nature of body. In the first place, then, hardness may be rejected, because if the stone were liquefied or reduced to powder, it would no longer possess hardness, and yet would not cease to be a body; color also may be thrown out of account, because we have frequently seen stones so transparent as to have no color; again, we may reject weight, because we have the case of fire, which, though very light, is still a body; and, finally, we may reject cold, heat, and all the other qualities of this sort, either because they are not considered as in the stone, or because, with the change of these qualities, the stone is not supposed to have lost the nature of body. After this examination we will find that nothing remains in the idea of body, except that it is something extended in length, breadth, and depth; and this something is comprised in our idea of space, not only of that which is full of body, but even of what is called void space.

XII. How space differs from body in our mode of conceiving it.

There is, however, some difference between them in the mode of conception; for if we remove a stone from the space or place in which it was, we conceive that its extension also is taken away, because we regard this as particular and inseparable from the stone itself; but meanwhile we suppose that the same extension of place in which this stone was remains, although the place of the stone be occupied by wood, water, air, or by any other body, or be even supposed vacant, because we now consider extension in general, and think that the same is common to stones, wood, water, air, and other bodies, and even to a vacuum itself if there is any such thing, provided it be of the same magnitude and figure as before and preserve the same situation among the external bodies which determine this space.

XIII. What external place is.

The reason of which is, that the words place and space signify nothing really different from body which is said to be in place, but merely designate its magnitude, figure, and situation among other bodies. For it is necessary, in order to determine this situation, to regard certain other bodies which we consider as immovable; and, according as we look to different bodies, we may see that the same thing at the same time does and does not change place. For example, when a vessel is being carried out to sea, a person sitting at the stern may be said to remain always in one place, if we look to the parts of the vessel, since with respect to these he preserves the same situation; and on the other hand, if regard be had to the neighboring shores, the same person will seem to be perpetually changing place, seeing he is constantly receding from one shore and approaching another. And besides, if we suppose that the earth moves, and that it makes precisely as much way from west to east as the vessel from east to west, we will again say that the person at the stern does not change his place, because this place will be determined by certain immovable points which we imagine to be in the heavens. But if at length we are persuaded that there are no points really immovable in the universe, as will hereafter be shown to be probable, we will thence conclude that nothing has a permanent place unless in so far as it is fixed by our thought.

XIV. Wherein place and space differ.

The terms place and space, however, differ in signification, because place more expressly designates situation than magnitude or figure, while, on the other hand, we think of the latter when we speak of space For we frequently say that a thing succeeds to the place of another, although it be not exactly of the same magnitude or figure; but we do not therefore admit that it occupies the same space as the other; and when the situation is changed we say that the place also is changed, although there are the same magnitude and figure as before: so that when we say that a thing is in a particular place, we mean merely that it is situated in a determinate way in respect of certain other objects; and when we add that it occupies such a space or place, we understand besides that it is of such determinate magnitude and figure as exactly to fill this space.

XV. How external place is rightly taken for the superficies of the surrounding body.

And thus we never indeed distinguish space from extension in length, breadth, and depth; we sometimes, however, consider place as in the thing placed, and at other times as out of it. Internal place indeed differs in no way from space; but external place may be taken for the superficies that immediately surrounds the thing placed. It ought to be remarked that by superficies we do not here understand any part of the surrounding body, but only the boundary between the surrounding and surrounded bodies, which is nothing more than a mode; or at least that we speak of superficies in general which is no part of one body rather than another, but is always considered the same, provided it retain the same magnitude and figure. For although the whole surrounding body with its superficies were changed, it would not be supposed that the body which was surrounded by it had therefore changed its place, if it meanwhile preserved the same situation with respect to the other bodies that are regarded as immovable. Thus, if we suppose that a boat is carried in one direction by the current of a stream, and impelled by the wind in the opposite with an equal force, so that its situation with respect to the banks is not changed, we will readily admit that it remains in the same place, although the whole superficies which surrounds it is incessantly changing.

XVI. That a vacuum or space in which there is absolutely no body is repugnant to reason.

With regard to a vacuum, in the philosophical sense of the term, that is, a space in which there is no substance, it is evident that such does not exist, seeing the extension of space or internal place is not different from that of body. For since from this alone, that a body has extension in length, breadth, and depth, we have reason to conclude that it is a substance, it being absolutely contradictory that nothing should possess extension, we ought to form a similar inference regarding the space which is supposed void, viz, that since there is extension in it there is necessarily also substance.

XVII. That a vacuum in the ordinary use of the term does not exclude all body.

And, in truth, by the term vacuum in its common use, we do not mean a place or space in which there is absolutely nothing, but only a place in which there is none of those things we presume ought to be there. Thus, because a pitcher is made to hold water, it is said to be empty when it is merely filled with air; or if there are no fish in a fish-pond, we say there is nothing in it, although it be full of water; thus a vessel is said to be empty, when, in place of the merchandise which it was designed to carry, it is loaded with sand only, to enable it to resist the violence of the wind; and, finally, it is in the same sense that we say space is void when it contains nothing sensible, although it contain created and self-subsisting matter; for we are not in the habit of considering the bodies near us, unless in so far as they cause in our organs of sense impressions strong enough to enable us to perceive them. And if, in place of keeping in mind what ought to be understood by these terms a vacuum and nothing, we afterward suppose that in the space we called a vacuum, there is not only no sensible object, but no object at all, we will fall into the same error as if, because a pitcher in which there is nothing but air, is, in common speech, said to be empty, we were therefore to judge that the air contained in it is not a substance (*res subsistens*).

XVIII. How the prejudice of an absolute vacuum is to be corrected.

We have almost all fallen into this error from the earliest age, for, observing that there is no necessary connection between a vessel and the body it contains, we thought that God at least could take from a vessel the body which occupied it, without it being necessary that any other should be put in the place of the one removed. But that we may be able now to correct this false opinion, it is necessary to remark that there is in truth no connection between the vessel and the particular body which it contains, but that there is an absolutely necessary connection between the concave figure of the vessel and the extension considered generally which must be comprised in this cavity; so that it is not more contradictory to conceive a mountain without a valley than such a cavity without the extension it contains, or this extension apart from an extended substance, for, as we have often said, of nothing there can be no extension. And accordingly, if it be asked what would happen were God to remove from a vessel all the body contained in it, without permitting another body to occupy its place, the answer must be that the sides of the vessel would thus come into proximity with each other. For two bodies must touch each other when there is nothing between them, and it is manifestly contradictory for two bodies to be apart, in other words, that there should be a distance between them, and the distance yet be nothing; for all distance is a mode of extension, and cannot therefore exist without an extended substance.

XIX. That this confirms what was said of rarefaction.

After we have thus remarked that the nature of corporeal substance consists only in its being an extended thing, and that its extension is not different from that which we attribute to space, however empty, it is easy to discover the impossibility of any one of its parts in any way whatsoever occupying more space at one time than at another, and thus of being otherwise rarefied than in the way explained above; and it is easy to perceive also that there cannot be more matter or body in a vessel when it is filled with lead or gold, or any other body however heavy and hard, than when it but contains air and is supposed to be empty: for the quantity of the parts of which a body is composed does not depend on their weight or hardness, but only on the extension, which is always equal in the same vase.

XX. That from this the non-existence of atoms may likewise be demonstrated.

We likewise discover that there cannot exist any atoms or parts of matter that are of their own nature indivisible. For however small we suppose these parts to be, yet because they are necessarily extended, we are always able in thought to divide any one of them into two or more smaller parts, and may accordingly admit their divisibility. For there is nothing we can divide in thought which we do not thereby recognize to be divisible; and, therefore, were we to judge it indivisible our judgment would not be in harmony with the knowledge we have of the thing; and although we should even suppose that God had reduced any particle of matter to a smallness so extreme that it did not admit of being further divided, it would nevertheless be improperly styled indivisible, for though God had rendered the particle so small that it was not in the power of any creature to divide it, he could not however deprive himself of the ability to do so, since it is absolutely impossible for him to lessen his own omnipotence, as was before observed. Wherefore, absolutely speaking, the smallest extended particle is always divisible, since it is such of its very nature.

XXI. It is thus also demonstrated that the extension of the world is indefinite.

We further discover that this world or the whole (*universitas*) of corporeal substance, is extended without limit, for wherever we fix a limit, we still not only imagine beyond it spaces indefinitely extended, but perceive these to be truly imaginable, in other words, to be in reality such as we imagine them; so that they contain in them corporeal substance indefinitely extended, for, as has been already shown at length, the idea of extension which we conceive in any space whatever is plainly identical with the idea of corporeal substance.

XXII. It also follows that the matter of the heavens and earth is the same, and that there cannot be a plurality of worlds.

And it may also be easily inferred from all this that the earth and heavens are made of the same matter; and that even although there were an infinity of worlds, they would all be composed of this matter; from which it follows that a plurality of worlds is impossible, because we clearly conceive that the matter whose nature consists only in its being an extended substance, already wholly occupies all the imaginable spaces where these other worlds could alone be, and we cannot find in ourselves the idea of any other matter.

XXIII. That all the variety of matter, or the diversity of its forms, depends on motion.

There is therefore but one kind of matter in the whole universe, and this we know only by its being extended. All the properties we distinctly perceive to belong to it are reducible to its capacity of being divided and moved according to its parts; and accordingly it is capable of all those affections which we perceive can arise from the motion of its parts. For the partition of matter in thought makes no change in it; but all variation of it, or diversity of form, depends on motion. The philosophers even seem universally to have observed this, for they said that nature was the principle of motion and rest, and by nature they understood that by which all corporeal things become such as they are found in experience.

XXIV. What motion is, taking the term in its common use.

But motion (viz, local, for I can conceive no other kind of motion, and therefore I do not think we ought to suppose there is any other in nature), in the ordinary sense of the term, is nothing more than the ACTION BY WHICH A BODY PASSES FROM ONE PLACE TO ANOTHER. And just as we have remarked above that the same thing may be said to change and not to change place at the same time, so also we may say that the same thing is at the same time moved and not moved. Thus, for example, a person seated in a vessel which is setting sail, thinks he is in motion if he looks to the shore that he has left, and consider it as fixed; but not if he regard the ship itself, among the parts of which he preserves always the same situation. Moreover, because we are accustomed to suppose that there is no motion without action, and that in rest there is the cessation of action, the person thus seated is more properly said to be at rest than in motion, seeing he is not conscious of being in action.

XXV. What motion is properly so called.

But if, instead of occupying ourselves with that which has no foundation, unless in ordinary usage, we desire to know what ought to be understood by motion according to the truth of the thing, we may say, in order to give it a determinate nature, that it is THE TRANSPORTING OF ONE PART OF MATTER OR OF ONE BODY FROM THE VICINITY OF THOSE BODIES THAT ARE IN IMMEDIATE CONTACT WITH IT, OR WHICH WE REGARD AS AT REST, TO THE VICINITY OF OTHER BODIES. By a body as a part of matter, I understand all that which is transferred together, although it be perhaps composed of several parts, which in themselves have other motions; and I say that it is the transporting and not the force or action which transports, with the view of showing that motion is always in the movable thing, not in that which moves; for it seems to me that we are not accustomed to distinguish these two things with sufficient accuracy. Further, I understand that it is a mode of the movable thing, and not a substance, just as figure is a property of the thing figured, and repose of that which is at rest.

PART III.

OF THE VISIBLE WORLD.

I. THAT we cannot think too highly of the works of God.

Having now ascertained certain principles of material things, which were sought, not by the prejudices of the senses, but by the light of reason, and which thus possess so great evidence that we cannot doubt of their truth, it remains for us to consider whether from these alone we can deduce the explication of all the phenomena of nature. We will commence with those phenomena that are of the greatest generality, and upon which the others depend, as, for example, with the general structure of this whole visible world. But in order to our philosophizing aright regarding this, two things are first of all to be observed. The first is, that we should ever bear in mind the infinity of the power and goodness of God, that we may not fear falling into error by imagining his works to be too great, beautiful, and perfect, but that we may, on the contrary, take care lest, by supposing limits to them of which we have no certain knowledge, we appear to think less highly than we ought of the power of God.

II. That we ought to beware lest, in our presumption, we imagine that the ends which God proposed to himself in the creation of the world are understood by us.

The second is, that we should beware of presuming too highly of ourselves, as it seems we should do if we supposed certain limits to the world, without being assured of their existence either by natural reasons or by divine revelation, as if the power of our thought extended beyond what God has in reality made; but likewise still more if we persuaded ourselves that all things were created by God for us only, or if we merely supposed that we could comprehend by the power of our intellect the ends which God proposed to himself in creating the universe.

III. In what sense it may be said that all things were created for the sake of man.

For although, as far as regards morals, it may be a pious thought to believe that God made all things for us, seeing we may thus be incited to greater gratitude and love toward him; and although it is even in some sense true, because there is no created thing of which we cannot make some use, if it be only that of exercising our mind in considering it, and honoring God on account of it, it is yet by no means probable that all things were created for us in this way that God had no other end in their creation; and this supposition would be plainly ridiculous and inept in physical reasoning, for we do not doubt but that many things exist, or formerly existed and have now ceased to be, which were never seen or known by man, and were never of use to him.

PART IV.

OF THE EARTH.

CLXXXVIII. OF WHAT is to be borrowed from disquisitions on animals and man to advance the knowledge of material objects.

I should add nothing further to this the Fourth Part of the Principles of Philosophy, did I purpose carrying out my original design of writing a Fifth and Sixth Part, the one treating of things possessed of life, that is, animals and plants, and the other of man. But because I have not yet acquired sufficient knowledge of all the matters of which I should desire to treat in these two last parts, and do not know whether I ever shall have sufficient leisure to finish them, I will here subjoin a few things regarding the objects of our senses, that I may not, for the sake of the latter, delay too long the publication of the former parts, or of what may be desiderated in them, which I might have reserved for explanation in those others: for I have hitherto described this earth, and generally the whole visible world, as if it were merely a machine in which there was nothing at all to consider except the figures and motions of its parts, whereas our senses present to us many other things, for example, colors, smells, sounds, and the like, of which, if I did not speak at all, it would be thought I had omitted the explication of the majority of the objects that are in nature.

CLXXXIX. What perception (*sensus*) is, and how we perceive.

We must know, therefore, that although the human soul is united to the whole body, it has, nevertheless, its principal seat in the brain, where alone it not only understands and imagines, but also perceives; and this by the medium of the nerves, which are extended like threads from the brain to all the other members, with which they are so connected that we can hardly touch any one of them without moving the extremities of some of the nerves spread over it: and this motion passes to the other extremities of those nerves which are collected in the brain round the seat of the soul,* as I have already explained with sufficient minuteness in the fourth chapter of the Dioptrics. But the movements which are thus excited in the brain by the nerves, variously affect the soul or mind, which is intimately conjoined with the brain, according to the diversity of the motions themselves. And the diverse affections of the mind or thoughts that immediately arise from these motions, are called perceptions of the senses (*sensuum perceptiones*), or, as we commonly speak, sensations (*sensus*).

CXC. Of the distinction of the senses; and, first, of the internal, that is, of the affections of the mind (passions), and the natural appetites.

The varieties of these sensations depend, firstly, on the diversity of the nerves themselves, and, secondly, of the movements that are made in each nerve. We have not, however, as many different senses as there are nerves. We can distinguish but seven principal classes of nerves, of which two belong to the internal, and the other five to the external senses. The nerves which extend to the stomach, the œsophagus, the fauces, and the other internal parts that are subservient to our natural wants, constitute one of our internal senses. This is called the natural appetite (*appetitus naturalis*). The other internal sense, which embraces all the emotions (*commotiones*) of the mind or passions, and affections, as joy, sadness, love, hate, and the like, depends upon the nerves which extend to the heart and the parts about the heart, and are exceedingly small; for, by way of example, when the blood happens to be pure and well tempered, so that it dilates in the heart more readily and strongly than usual, this so enlarges and moves the small nerves scattered around the orifices, that there is thence a corresponding movement in the brain, which affects the mind with a certain natural feeling of joy; and as often as these same nerves are moved in the same way, although this is by other causes, they excite in our mind the same feeling (*sensus, sentiment*). Thus, the imagination of the enjoyment of a good does not contain in itself the feeling of joy, but it causes the animal spirits to pass from the brain to the muscles in which these nerves are inserted; and thus dilating the orifices of the heart, it also causes these small nerves to move in the way appointed by nature to afford the sensation of joy. Thus, when we receive news, the mind first of all judges of it, and if the news be good, it rejoices with that intellectual joy (*gaudium intellectuale*) which is independent of any emotion (*commotio*) of the body, and which the Stoics did not deny to their wise man [although they supposed him exempt from all passion]. But as soon as this joy passes from the understanding to the imagination, the spirits flow from the brain to the muscles that are about the heart, and there excite the motion of the small nerves, by means of which another motion is caused in the brain, which affects the mind with the sensation of animal joy (*laetitia animalis*). On the same principle, when the blood is so thick that it flows but sparingly into the ventricles of the heart, and is not there sufficiently dilated, it excites in the same nerves a motion quite different from the preceding, which, communicated to the brain, gives to the mind the sensation of sadness, although the mind itself is perhaps ignorant of the cause of its sadness. And all the other causes which move these nerves in the same way may also give to the mind the same sensation. But the other movements of the same nerves produce other effects, as the feelings of love, hate, fear, anger, etc., as far as they are merely affections or passions of the mind; in other words, as far as they are confused thoughts which the mind has not from itself alone, but from its being closely joined to the body, from which it receives impressions; for there is the widest difference between these passions and the distinct thoughts which we have of what ought to be loved, or chosen, or shunned, etc. [although these are often enough found together]. The natural appetites, as hunger, thirst, and the others, are likewise sensations excited in the mind by means of the nerves of the stomach, fauces, and other parts, and are entirely different from the will which we have to eat, drink [and to do all that which we think proper for the conservation of our body]; but, because this will or appetition almost always accompanies them, they are therefore named appetites.

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* "Common Sense."—*French.*

CXCI. Of the external senses; and first of touch.

We commonly reckon the external senses five in number, because there are as many different kinds of objects which move the nerves and their organs, and an equal number of kinds of confused thoughts excited in the soul by these motions. In the first place, the nerves terminating in the skin of the whole body can be touched through this medium by any terrene objects whatever, and moved by these wholes, in one way by their hardness, in another by their gravity, in a third by their heat, in in a fourth by their humidity, etc.,—and in as many diverse modes as they are either moved or hindered from their ordinary motion, to that extent are diverse sensations excited in the mind, from which a corresponding number of tactile qualities derive their appellations. Besides this, when these nerves are moved a little more powerfully than usual, but not, nevertheless, to the degree by which our body is in any way hurt, there thus arises a sensation of titillation, which is naturally agreeable to the mind, because it testifies to it of the powers of the body with which it is joined [in that the latter can suffer the action causing this titillation, without being hurt]. But if this action be strong enough to hurt our body in any way, this gives to our mind the sensation of pain. And we thus see why corporeal pleasure and pain, although sensations of quite an opposite character, arise, nevertheless, from causes nearly alike.

CXCII. Of taste.

In the second place, the other nerves scattered over the tongue and the parts in its vicinity are diversely moved by the particles of the same bodies, separated from each other and floating in the saliva in the mouth, and thus cause sensations of diverse tastes according to the diversity of figure in these particles.*

CXCIII. Of smell.

Thirdly, two nerves also or appendages of the brain, for they do not go beyond the limits of the skull, are moved by the particles of terrestrial bodies, separated and flying in the air, not indeed by all particles indifferently, but by those only that are sufficiently subtle and penetrating to enter the pores of the bone we call the spongy, when drawn into the nostrils, and thus to reach the nerves. From the different motions of these particles arise the sensations of the different smells.

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* In the French this section begins, «Taste, after touch the grossest of the senses,» etc.

CXCIV. Of hearing.

Fourthly, there are two nerves within the ears, so attached to three small bones that are mutually sustaining, and the first of which rests on the small membrane that covers the cavity we call the tympanum of the ear, that all the diverse vibrations which the surrounding air communicates to this membrane, are transmitted to the mind by these nerves, and those vibrations give rise, according to their diversity, to the sensations of the different sounds.

CXCV. Of sight.

Finally, the extremities of the optic nerves, composing the coat in the eyes called the retina, are not moved by the air nor by any terrestrial object, but only by the globules of the second element, whence we have the sense of light and colors: as I have already at sufficient length explained in the Dioptrics and treatise of Meteors.*

CXCVI. That the soul perceives only in so far as it is in the brain.

It is clearly established, however, that the soul does not perceive in so far as it is in each member of the body, but only in so far as it is in the brain, where the nerves by their movements convey to it the diverse actions of the external objects that touch the parts of the body in which they are inserted. For, in the first place, there are various maladies, which, though they affect the brain alone, yet bring disorder upon, or deprive us altogether of the use of, our senses, just as sleep, which affects the brain only, and yet takes from us daily during a great part of our time the faculty of perception which afterward in our waking state is restored to us. The second proof is, that though there be no disease in the brain, [or in the members in which the organs of the external senses are], it is nevertheless sufficient to take away sensation from the part of the body where the nerves terminate, if only the movement of one of the nerves that extend from the brain to these members be obstructed in any part of the distance that is between the two. And the last proof is, that we sometimes feel pain as if in certain of our members, the cause of which, however, is not in these members where it is felt, but somewhere nearer the brain, through which the nerves pass that give to the mind the sensation of it. I could establish this fact by innumerable experiments; I will here, however, merely refer to one of them. A girl suffering from a bad ulcer in the hand, had her eyes bandaged whenever the surgeon came to visit her, not being able to bear the sight of the dressing of the sore; and, the gangrene having spread, after the expiry of a few days the arm was amputated from the elbow [without the girl's knowledge]; linen cloths tied one above the other were substituted in place of the part amputated, so that she remained for some time without knowing that the operation had been performed, and meanwhile she complained of feeling various pains, sometimes in one finger of the hand that was cut off, and sometimes in another. The only explanation of this is, that the nerves which before stretched downward from the brain to the hand, and then terminated in the arm close to the elbow, were there moved in the same way as they required to be moved before in the hand for the purpose of impressing on the mind residing in the brain the sensation of pain in this or that finger. [And this clearly shows that the pain of the hand is not felt by the mind in so far as it is in the hand, but in so far as it is in the brain.]

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* In the French this section begins, «Finally, sight is the most subtle of all the senses,» etc.

CXCVII. That the nature of the mind is such that from the motion alone of the body various sensations can be excited in it.

In the next place, it can be proved that our mind is of such a nature that the motions of the body alone are sufficient to excite in it all sorts of thoughts, without it being necessary that these should in any way resemble the motions which give rise to them, and especially that these motions can excite in it those confused thoughts called sensations (*sensus*, *sensationes*). For we see that words whether uttered by the voice or merely written, excite in our minds all kinds of thoughts and emotions. On the same paper, with the same pen and ink, by merely moving the point of the pen over the paper in a particular way, we can trace letters that will raise in the minds of our readers the thoughts of combats, tempests, or the furies, and the passions of indignation and sorrow; in place of which, if the pen be moved in another way hardly different from the former, this slight change will cause thoughts widely different from the above, such as those of repose, peace, pleasantness, and the quite opposite passions of love and joy. Some one will perhaps object that writing and speech do not immediately excite in the mind any passions, or imaginations of things different from the letters and sounds, but afford simply the knowledge of these, on occasion of which the mind, understanding the signification of the words, afterward excites in itself the imaginations and passions that correspond to the words. But what will be said of the sensations of pain and titillation? The motion merely of a sword cutting a part of our skin causes pain [but does not on that account make us aware of the motion or figure of the sword]. And it is certain that this sensation of pain is not less different from the motion that causes it, or from that of the part of our body which the sword cuts, than are the sensations we have of color, sound, odor, or taste. On this ground we may conclude that our mind is of such a nature that the motions alone of certain bodies can also easily excite in it all the other sensations, as the motion of a sword excites in it the sensation of pain.

CXCVIII. That by our senses we know nothing of external objects beyond their figure [or situation], magnitude, and motion.

Besides, we observe no such difference between the nerves as to lead us to judge that one set of them convey to the brain from the organs of the external senses anything different from another, or that anything at all reaches the brain besides the local motion of the nerves themselves. And we see that local motion alone causes in us not only the sensation of titillation and of pain, but also of light and sounds. For if we receive a blow on the eye of sufficient force to cause the vibration of the stroke to reach the retina, we see numerous sparks of fire, which, nevertheless, are not out of our eye; and when we stop our ear with our finger, we hear a humming sound, the cause of which can only proceed from the agitation of the air that is shut up within it. Finally, we frequently observe that heat [hardness, weight], and the other sensible qualities, as far as they are in objects, and also the forms of those bodies that are purely material, as, for example, the forms of fire, are produced in them by the motion of certain other bodies, and that these in their turn likewise produce other motions in other bodies. And we can easily conceive how the motion of one body may be caused by that of another, and diversified by the size, figure, and situation of its parts, but we are wholly unable to conceive how these same things (viz, size, figure, and motion), can produce something else of a nature entirely different from themselves, as, for example, those substantial forms and real qualities which many philosophers suppose to be in bodies; nor likewise can we conceive how these qualities or forms possess force to cause motions in other bodies. But since we know, from the nature of our soul, that the diverse motions of body are sufficient to produce in it all the sensations which it has, and since we learn from experience that several of its sensations are in reality caused by such motions, while we do not discover that anything besides these motions ever passes from the organs of the external senses to the brain, we have reason to conclude that we in no way likewise apprehend that in external objects, which we call light, color, smell, taste, sound, heat or cold, and the other tactile qualities, or that which we call their substantial forms, unless as the various dispositions of these objects which have the power of moving our nerves in various ways.*

CXCIX. That there is no phenomenon of nature whose explanation has been omitted in this treatise.

And thus it may be gathered, from an enumeration that is easily made, that there is no phenomenon of nature whose explanation has been omitted in this treatise; for beyond what is perceived by the senses, there is nothing that can be considered a phenomenon of nature. But leaving out of account, motion, magnitude, figure [and the situation of the parts of each body], which I have explained as they exist in body, we perceive nothing out of us by our senses except light, colors, smells, tastes, sounds, and the tactile qualities; and these I have recently

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*«The diverse figures, situations, magnitudes, and motions of their parts.» — *French.*

shown to be nothing more, at least so far as they are known to us, than certain dispositions of the objects, consisting in magnitude, figure, and motion.

CC. That this treatise contains no principles which are not universally received; and that this philosophy is not new, but of all others the most ancient and common.

But I am desirous also that it should be observed that, though I have here endeavored to give an explanation of the whole nature of material things, I have nevertheless made use of no principle which was not received and approved by Aristotle, and by the other philosophers of all ages; so that this philosophy, so far from being new, is of all others the most ancient and common: for I have in truth merely considered the figure, motion, and magnitude of bodies, and examined what must follow from their mutual concourse on the principles of mechanics, which are confirmed by certain and daily experience. But no one ever doubted that bodies are moved, and that they are of various sizes and figures, according to the diversity of which their motions also vary, and that from mutual collision those somewhat greater than others are divided into many smaller, and thus change figure. We have experience of the truth of this, not merely by a single sense, but by several, as touch, sight, and hearing: we also distinctly imagine and understand it. This cannot be said of any of the other things that fall under our senses, as colors, sounds, and the like; for each of these affects but one of our senses, and merely impresses upon our imagination a confused image of itself, affording our understanding no distinct knowledge of what it is.

CCI. That sensible bodies are composed of insensible particles.

But I allow many particles in each body that are perceived by none of our senses, and this will not perhaps be approved of by those who take the senses for the measure of the knowable. [We greatly wrong human reason, however, as appears to me, if we suppose that it does not go beyond the eyesight]; for no one can doubt that there are bodies so small as not to be perceptible by any of our senses, provided he only consider what is each moment added to those bodies that are being increased little by little, and what is taken from those that are diminished in the same way. A tree increases daily, and it is impossible to conceive how it becomes greater than it was before, unless we at the same time conceive that some body is added to it. But who ever observed by the senses those small bodies that are in one day added to a tree while growing? Among the philosophers at least, those who hold that quantity is indefinitely divisible, ought to admit that in the division the parts may become so small as to be wholly imperceptible. And indeed it ought not to be a matter of surprise, that we are unable to perceive very minute bodies; for the nerves that must be moved by objects to cause perception are not themselves very minute, but are like small cords, being composed of a quantity of smaller fibers, and thus the most minute bodies are not capable of moving them. Nor do I think that any one who makes use of his reason will deny that we philosophize with much greater truth when we judge of what takes place in those small bodies which are imperceptible from their minuteness only, after the analogy of what we see occurring in those we do perceive [and in this way explain all that is in nature, as I have essayed to do in this treatise], than when we give an explanation of the same things by inventing I know not what novelties, that have no relation to the things we actually perceive [as first matter, substantial forms, and all that grand array of qualities which many are in the habit of supposing, each of which it is more difficult to comprehend than all that is professed to be explained by means of them].

CCII. That the philosophy of Democritus is not less different from ours than from the common.*

But it may be said that Democritus also supposed certain corpuscles that were of various figures, sizes, and motions, from the heaping together and mutual concourse of which all sensible bodies arose; and, nevertheless, his mode of philosophizing is commonly rejected by all. To this I reply that the philosophy of Democritus was never rejected by any one, because he allowed the existence of bodies smaller than those we perceive, and attributed to them diverse sizes, figures, and motions, for no one can doubt that there are in reality such, as we have already shown; but it was rejected in the first place, because he supposed that these corpuscles were indivisible, on which ground I also reject it; in the second place, because he imagined there was a vacuum about them, which I show to be impossible; thirdly, because he attributed gravity to these bodies, of which I deny the existence in any body, in so far as a body is considered by itself, because it is a quality that depends on the relations of situation and motion which several bodies bear to each other; and, finally, because he has not explained in particular how all things arose from the concourse of corpuscles alone, or, if he gave this explanation with regard to a few of them, his whole reasoning was far from being coherent [or such as would warrant us in extending the same explanation to the whole of nature]. This, at least, is the verdict we must give regarding his philosophy, if we may judge of his opinions from what has been handed down to us in writing. I leave it to others to determine whether the philosophy I profess possesses a valid coherency [and whether on its principles we can make the requisite number of deductions; and, inasmuch as the consideration of figure, magnitude, and motion has been admitted by Aristotle and by all the others, as well as by Democritus, and since I reject all that the latter has supposed, with this single exception, while I reject generally all that has been supposed by the others, it is plain that this mode of philosophizing has no more affinity with that of Democritus than of any other particular sect].

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* «That of Aristotle or the others.» — *French.*

CCIII. How we may arrive at the knowledge of the figures [magnitude], and motions of the insensible particles of bodies.

But, since I assign determinate figures, magnitudes, and motions to the insensible particles of bodies, as if I had seen them, whereas I admit that they do not fall under the senses, some one will perhaps demand how I have come by my knowledge of them. [To this I reply, that I first considered in general all the clear and distinct notions of material things that are to be found in our understanding, and that, finding no others except those of figures, magnitudes, and motions, and of the rules according to which these three things can be diversified by each other, which rules are the principles of geometry and mechanics, I judged that all the knowledge man can have of nature must of necessity be drawn from this source; because all the other notions we have of sensible things, as confused and obscure, can be of no avail in affording us the knowledge of anything out of ourselves, but must serve rather to impede it.] Thereupon, taking as my ground of inference the simplest and best known of the principles that have been implanted in our minds by nature, I considered the chief differences that could possibly subsist between the magnitudes, and figures, and situations of bodies insensible on account of their smallness alone, and what sensible effects could be produced by their various modes of coming into contact; and afterward, when I found like effects in the bodies that we perceive by our senses, I judged that they could have been thus produced, especially since no other mode of explaining them could be devised. And in this matter the example of several bodies made by art was of great service to me: for I recognize no difference between these and natural bodies beyond this, that the effects of machines depend for the most part on the agency of certain instruments, which, as they must bear some proportion to the hands of those who make them, are always so large that their figures and motions can be seen; in place of which, the effects of natural bodies almost always depend upon certain organs so minute as to escape our senses. And it is certain that all the rules of mechanics belong also to physics, of which it is a part or species [so that all that is artificial is withal natural]: for it is not less natural for a clock, made of the requisite number of wheels, to mark the hours, than for a tree, which has sprung from this or that seed, to produce the fruit peculiar to it. Accordingly, just as those who are familar with automata, when they are informed of the use of a machine, and see some of its parts, easily infer from these the way in which the others, that are not seen by them, are made; so from considering the sensible effects and parts of natural bodies, I have essayed to determine the character of their causes and insensible parts.

CCIV. That, touching the things which our senses do not perceive, it is sufficient to explain how they can be [and that this is all that Aristotle has essayed].

But here some one will perhaps reply, that although I have supposed causes which could produce all natural objects, we ought not on this account to conclude that they were produced by these causes; for, just as the same artisan can make two clocks, which, though they both equally well indicate the time, and are not different in outward appearance, have nevertheless nothing resembling in the composition of their wheels; so doubtless the Supreme Maker of things has an infinity of diverse means at his disposal, by each of which he could have made all the things of this world to appear as we see them, without it being possible for the human mind to know which of all these means he chose to employ. I most freely concede this; and I believe that I have done all that was required, if the causes I have assigned are such that their effects accurately correspond to all the phenomena of nature, without determining whether it is by these or by others that they are actually produced. And it will be sufficient for the use of life to know the causes thus imagined, for medicine, mechanics, and in general all the arts to which the knowledge of physics is of service, have for their end only those effects that are sensible, and that are accordingly to be reckoned among the phenomena of nature.* And lest it should be supposed that Aristotle did, or professed to do, anything more than this, it ought to be remembered that he himself expressly says, at the commencement of the seventh chapter of the first book of the Meteorologics, that, with regard to things which are not manifest to the senses, he thinks to adduce sufficient reasons and demonstrations of them, if he only shows that they may be such as he explains them.

CCV. That nevertheless there is a moral certainty that all the things of this world are such as has been here shown they may be.

But nevertheless, that I may not wrong the truth by supposing it less certain than it is, I will here distinguish two kinds of certitude. The first is called moral, that is, a certainty sufficient for the conduct of life, though, if we look to the absolute power of God, what is morally certain may be false. [Thus, those who never visited Rome do not doubt that it is a city of Italy, though it might be that all from whom they got their information were deceived.] Again, if any one, wishing to decipher a letter written in Latin characters that are not placed in regular order, bethinks himself of reading a B wherever an A is found, and a C wherever there is a B, and thus of substituting in place of each letter the one which follows it in the order of the alphabet, and if by this means he finds that there are certain Latin words composed of these, he will not doubt that the true meaning of the writing is contained in these words, although he may discover this only by conjecture, and although it is possible that the writer of it did not arrange the letters on this principle of alphabetical order, but on some other, and thus concealed another meaning in it: for this is so improbable [especially when the cipher contains a number of words] as to seem incredible. But they who observe how many things regarding the magnet, fire, and the fabric of the whole world, are here deduced from a very small number of principles, though they deemed that I had taken them up at random and without grounds, will yet perhaps acknowledge that it could hardly happen that so many things should cohere if these principles were false.

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* «Have for their end only to apply certain sensible bodies to each other in such a way that, in the course of natural causes, certain sensible effects may be produced; and we will be able to accomplish this quite as well by considering the series of certain causes thus imagined, although false, as if they were the true, since this series is supposed similar as far as regards sensible effects.» —*French.*

CCVI. That we possess even more than a moral certainty of it.

Besides, there are some, even among natural, things which we judge to be absolutely certain. [Absolute certainty arises when we judge that it is impossible a thing can be otherwise than as we think it.] This certainty is founded on the metaphysical ground, that, as God is supremely good and the source of all truth, the faculty of distinguishing truth from error which he gave us, cannot be fallacious so long as we use it aright, and distinctly perceive anything by it. Of this character are the demonstrations of mathematics, the knowledge that material things exist, and the clear reasonings that are formed regarding them. The results I have given in this treatise will perhaps be admitted to a place in the class of truths that are absolutely certain, if it be considered that they are deduced in a continuous series from the first and most elementary principles of human knowledge;

especially if it be sufficiently understood that we can perceive no external objects unless some local motion be caused by them in our nerves, and that such motion cannot be caused by the fixed stars, owing to their great distance from us, unless a motion be also produced in them and in the whole heavens lying between them and us: for these points being admitted, all the others, at least the more general doctrines which I have advanced regarding the world or earth [*e. g.*, the fluidity of the heavens, Part III., §. XLVI.], will appear to be almost the only possible explanations of the phenomena they present.

CCVII. That, however, I submit all my opinions to the authority of the church.

Nevertheless, lest I should presume too far, I affirm nothing, but submit all these my opinions to the authority of the church and the judgment of the more sage; and I desire no one to believe anything I may have said, unless he is constrained to admit it by the force and evidence of reason.

APPENDIX.

REASONS WHICH ESTABLISH THE EXISTENCE OF GOD, AND THE DISTINCTION BETWEEN THE MIND AND BODY OF MAN, DISPOSED IN GEOMETRICAL ORDER.

(FROM THE REPLY TO THE SECOND OBJECTIONS—LATIN, 1670. PP. 85–91. FRENCH, GARNIER. TOM. II., PP. 74–84.)

DEFINITIONS.

I. BY THE term THOUGHT (*cogitatio*, *pensée*), I comprehend all that is in us, so that we are immediately conscious of it. Thus, all the operations of the will, intellect, imagination, and senses, are thoughts. But I have used the word IMMEDIATELY expressly to exclude whatever follows or depends upon our thoughts: for example, voluntary motion has, in truth, thought for its source (principle), but yet it is not itself thought. [Thus walking is not a thought, but the perception or knowledge we have of our walking is.]

II. By the word IDEA I understand that form of any thought, by the immediate perception of which I am conscious of that same thought; so that I can express nothing in words, when I understand what I say, without making it certain, by this alone, that I possess the idea of the thing that is signified by these words. And thus I give the appellation idea not to the images alone that are depicted in the phantasy; on the contrary, I do not here apply this name to them, in so far as they are in the corporeal phantasy, that is to say, in so far as they are depicted in certain parts of the brain, but only in so far as they inform the mind itself, when turned toward that part of the brain.

III. By the OBJECTIVE REALITY OF AN IDEA I understand the entity or being of the thing represented by the idea, in so far as this entity is in the idea; and, in the same manner, it may be called either an objective perfection, or objective artifice, etc. (*artificium objectivum*). For all that we conceive to be in the objects of the ideas is objectively [or by representation] in the ideas themselves.

IV. The same things are said to be FORMALLY in the objects of the ideas when they are in them such as we conceive them; and they are said to be in the objects EMINENTLY when they are not indeed such as we conceive them, but are so great that they can supply this defect by their excellence.

V. Everything in which there immediately resides, as in a subject, or by which there exists any object we perceive, that is, any property, or quality, or attribute of which we have in us a real idea, is called SUBSTANCE. For we have no other idea of substance, accurately taken, except that it is a thing in which exists formally or eminently this property or quality which we perceive, or which is objectively in some one of our ideas, since we are taught by the natural light that nothing can have no real attribute.

VI. The substance in which thought immediately resides is here called MIND (*mens*, *esprit*). I here speak, however, of *mens* rather than of *anima*, for the latter is equivocal, being frequently applied to denote a corporeal object.

VII. The substance which is the immediate subject of local extension, and of the accidents that presuppose this extension, as figure, situation, local motion, etc., is called BODY. But whether the substance which is called mind be the same with that which is called body, or whether they are two diverse substances, is a question to be hereafter considered.

VIII. The substance which we understand to be supremely perfect, and in which we conceive nothing that involves any defect, or limitation of perfection, is called God.

IX. When we say that some attribute is contained in the nature or concept of a thing, this is the same as if we said that the attribute is true of the thing, or that it may be affirmed of the thing itself.

X. Two substances are said to be really distinct, when each of them may exist without the other.

POSTULATES.

1st. I request that my readers consider how feeble are the reasons that have hitherto led them to repose faith in their senses, and how uncertain are all the judgments which they afterward founded on them; and that they will revolve this consideration in their mind so long and so frequently, that, in fine, they may acquire the habit of no longer trusting so confidently in their senses; for I hold that this is necessary to render one capable of apprehending metaphysical truths.

2d. That they consider their own mind, and all those of its attributes of which they shall find they cannot doubt, though they may have supposed that all they ever received by the senses was entirely false, and that they do not leave off considering it until they have acquired the habit of conceiving it distinctly, and of believing that it is more easy to know than any corporeal object.

3d. That they diligently examine such propositions as are self-evident, which they will find within themselves, as the following: That the same thing cannot at once be and not be; that nothing cannot be the efficient cause of anything, and the like; and thus exercise that clearness of understanding that has been given them by nature, but which the perceptions of the senses are wont greatly to disturb and obscure — exercise it, I say, pure and delivered from the objects of sense; for in this way the truth of the following axioms will appear very evident to them.

4th. That they examine the ideas of those natures which contain in them an assemblage of several attributes, such as the nature of the triangle, that of the square, or some other figure; as also the nature of mind, the nature of body, and above all that of God, or of a being supremely perfect. And I request them to observe that it may with truth be affirmed that all these things are in objects, which we clearly conceive to be contained in them: for example, because that, in the nature of the rectilineal triangle, this property is found contained — viz., that its three angles are equal to two right angles, and that in the nature of body or of an extended thing, divisibility is comprised (for we do not conceive any extended thing so small that we cannot divide it, at least in thought) — it is true that the three angles of a rectilineal triangle are equal to two right angles, and that all body is divisible.

5th. That they dwell much and long on the contemplation of the supremely perfect Being, and, among other things, consider that in the ideas of all other natures, possible existence is indeed contained, but that in the idea of God is contained not only possible but absolutely necessary existence. For, from this alone, and without any reasoning, they will discover that God exists: and it will be no less evident in itself than that two is an equal and three an unequal number, with other truths of this sort. For there are certain truths that are thus manifest to some without proof, which are not comprehended by others without a process of reasoning.

6th. That carefully considering all the examples of clear and distinct perception, and all of obscure and confused, of which I spoke in my Meditations, they accustom themselves to distinguish things that are clearly known from those that are obscure, for this is better learned by example than by rules; and I think that I have there opened up, or at least in some degree touched upon, all examples of this kind.

7th. That readers adverting to the circumstance that they never discovered any falsity in things which they clearly conceived, and that, on the contrary, they never found, unless by chance, any truth in things which they conceived but obscurely, consider it to be wholly irrational, if on account only of certain prejudices of the senses, or hypotheses which contain what is unknown, they call in doubt what is clearly and distinctly conceived by the pure understanding; for they will thus readily admit the following axioms to be true and indubitable, though I confess that several of them might have been much better unfolded, and ought rather to have been proposed as theorems than as axioms, if I had desired to be more exact.

AXIOMS OR COMMON NOTIONS.

I. Nothing exists of which it cannot be inquired what is the cause of its existing; for this can even be asked respecting God; not that there is need of any cause in order to his existence, but because the very immensity of his nature is the cause or reason why there is no need of any cause of his existence.

II. The present time is not dependent on that which immediately preceded it; for this reason, there is not need of a less cause for conserving a thing than for at first producing it.

III. Any thing or any perfection of a thing actually existent cannot have NOTHING, or a thing non-existent, for the cause of its existence.

IV. All the reality or perfection which is in a thing is found formally or eminently in its first and total cause.

V. Whence it follows likewise, that the objective reality of our ideas requires a cause in which this same reality is contained, not simply objectively, but formally or eminently. And it is to be observed that this axiom must of necessity be admitted, as upon it alone depends the knowledge of all things, whether sensible or insensible. For whence do we know, for example, that the sky exists? Is it because we see it? But this vision does not affect the mind unless in so far as it is an idea, and an idea inhering in the mind itself, and not an image depicted on the phantasy; and, by reason of this idea, we cannot judge that the sky exists unless we suppose that every idea must have a cause of its objective reality which is really existent; and this cause we judge to be the sky itself, and so in the other instances.

VI. There are diverse degrees of reality, that is, of entity [or perfection]: for substance has more reality than accident or mode, and infinite substance than finite; it is for this reason also that there is more objective reality in the idea of substance than in that of accident, and in the idea of infinite than in the idea of finite substance.

VII. The will of a thinking being is carried voluntarily and freely, for that is of the essence of will, but nevertheless infallibly, to the good that is clearly known to it; and, therefore, if it discover any perfections which it does not possess, it will instantly confer them on itself if they are in its power; [for it will perceive that to possess them is a greater good than to want them].

VIII. That which can accomplish the greater or more difficult, can also accomplish the less or the more easy.

IX. It is a greater and more difficult thing to create or conserve a substance than to create or conserve its attributes or properties; but this creation of a thing is not greater or more difficult than its conservation, as has been already said.

X. In the idea or concept of a thing existence is contained, because we are unable to conceive anything unless under the form of a thing which exists; but with this difference that, in the concept of a limited thing, possible or contingent existence is alone contained, and in the concept of a being sovereignly perfect, perfect and necessary existence is comprised.

PROPOSITION I.

The existence of God is known from the consideration of his nature alone.

DEMONSTRATION.

To say that an attribute is contained in the nature or in the concept of a thing, is the same as to say that this attribute is true of this thing, and that it may be affirmed to be in it (Definition IX.).

But necessary existence is contained in the nature or in the concept of God (by Axiom X.).

Hence it may with truth be said that necessary existence is in God, or that God exists.

And this syllogism is the same as that of which I made use in my reply to the sixth article of these objections; and its conclusion may be known without proof by those who are free from all prejudice, as has been said in Postulate V. But because it is not so easy to reach so great perspicacity of mind, we shall essay to establish the same thing by other modes

PROPOSITION II.

The existence of God is demonstrated *a posteriori*, from this alone, that his idea is in us.

DEMONSTRATION.

The objective reality of each of our ideas requires a cause in which this same reality is contained, not simply objectively, but formally or eminently (by Axiom V.).

But we have in us the idea of God (by Definitions II. and VIII.), and of this idea the objective reality is not contained in us, either formally or eminently (by Axiom VI.), nor can it be contained in any other except in God himself (by Definition VIII.).

Therefore this idea of God which is in us demands God for its cause, and consequently God exists (by Axiom III.).

PROPOSITION III.

The existence of God is also demonstrated from this, that we ourselves, who possess the idea of him, exist.

DEMONSTRATION.

If I possessed the power of conserving myself, I should likewise have the power of conferring, *à fortiori*, on myself, all the perfections that are wanting to me (by Axioms VIII. and IX.), for these perfections are only attributes of substance, whereas I myself am a substance.

But I have not the power of conferring myself on these perfections, for otherwise I should already possess them (by Axiom VII.).

Hence, I have not the power of self-conservation.

Further, I cannot exist without being conserved, so long as I exist, either by myself, supposing I possess the power, or by another who has this power (by Axioms I. and II.).

But I exist, and yet I have not the power of self-conservation, as I have recently proved. Hence I am conserved by another.

Further, that by which I am conserved has in itself formally or eminently all that is in me (by Axiom IV.).

But I have in me the perception of many perfections that are wanting to me, and that also of the idea of God (by Definitions II. and VIII.). Hence the perception of these same perfections is in him by whom I am conserved.

Finally, that same being by whom I am conserved cannot have the perception of any perfections that are wanting to him, that is to say, which he has not in himself formally or eminently (by Axiom VII.); for having the power of conserving me, as has been recently said, he should have, *à fortiori*, the power of conferring these perfections on himself, if they were wanting to him (by Axioms VIII. and IX.).

But he has the perception of all the perfections which I discover to be wanting to me, and which I conceive can be in God alone, as I recently proved:

Hence he has all these in himself, formally or eminently, and thus he is God.

COROLLARY.

God has created the sky and the earth and all that is therein contained; and besides this he can make all the things which we clearly conceive in the manner in which we conceive them.

DEMONSTRATION.

All these things clearly follow from the preceding proposition. For in it we have proved the existence of God, from its being necessary that some one should exist in whom are contained formally or eminently all the perfections of which there is in us any idea.

But we have in us the idea of a power so great, that by the being alone in whom it resides, the sky and the earth, etc., must have been created, and also that by the same being all the other things which we conceive as possible can be produced.

Hence, in proving the existence of God, we have also proved with it all these things.

PROPOSITION IV.

The mind and body are really distinct.

DEMONSTRATION.

All that we clearly conceive can be made by God in the manner in which we conceive it (by foregoing Corollary).

But we clearly conceive mind, that is, a substance which thinks, without body: that is to say, without an extended substance (by Postulate II.); and, on the other hand, we as clearly conceive body without mind (as every one admits):

Hence, at least, by the omnipotence of God, the mind can exist without the body, and the body without the mind.

Now, substances which can exist independently of each other, are really distinct (by Definition X.).

But the mind and the body are substances (by Definitions V., VI. and VII.), which can exist independently of each other, as I have recently proved:

Hence the mind and the body are really distinct.

And it must be observed that I have here made use of the omnipotence of God in order to found my proof on it, not that there is need of any extraordinary power in order to separate the mind from the body, but for this reason, that, as I have treated of God only in the foregoing propositions, I could not draw my proof from any other source than from him: and it matters very little by what power two things are separated in order to discover that they are really distinct.

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